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GRE VİRİKE (PERIOD I) – Early Bronze Age Ritual Facilities on the Middle Euphrates River

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ABSTRACT

On a mudbrick terrace by the Euphrates River plastered pools, a basalt channel, circular stone-built pits containing mammal bones and grains, and a basalt stairway leading to an underground spring were unearthed. Smaller pits in the clay plaster between the slabs covering the pits contained grains and ash. These structures do not seem to have been used in daily life. According to the ancient Near Eastern cuneiform sources water, ash, grains and animal bones indicate ritual activities such as libation, sacrifices and incense-burning. The site might have been used as an open-air sanctuary in the first half of the 3rd Millennium BC, where rituals associated with Spring and harvest feasts were performed.

INTRODUCTION

The excavations at Gre Virike in the water reservoir area of the Carchemish Dam on the Euphrates River unearthed evidence of ritual activities dating to the 3rd Millennium BC. The site is 10 km to the north of Carchemish and 15 km to the south of Birecik in the province of Şanlıurfa, on a pebble terrace on the eastern bank of the Euphrates River (Figure 1). The site was discovered during a survey of the Euphrates and Tigris Reconnaissance Project[2] and salvage excavations were carried out at the site[3].

The excavations revealed a mudbrick terrace, with an area of 1750 m^2 (Figure 10-11)[4]. The terrace is ca 35 x 50 m and is preserved to a height of 1.20-1.40 m (Figure 3: a, j, l; 12). The structures on this terrace indicate three periods of structures:

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[2] Algaze et al. 1994, 54-55.

[3] Ökse 2001; 2002; 2004. The excavations were carried out within the Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs in Turkey, organised by the Ministry of Culture and the Centre for Research and Assessment of the Historic Environment of the Middle East Technical University in Ankara, and was financed by the State Hydraulic Works of Turkey. I would like to thank Prof. Dr. N. Tuna, Dr. J. Velibeyoğlu and Mr. E. Bucak, the director of the Şanlıurfa Museum, for their support, and archaeologists Dr. A. Engin, A. Görmüş MA., E. Atay, F. Doğan, U. T. Kınacı, I. T. Önen, S. Pamuk and others for their assistance during the excavations.

[4] Ökse forthcoming a.

Period III: Medieval store-houses[5]

Period II B: Various Early Bronze Age IV graves[6]

Period II A: Early Bronze Age III-IV chamber tomb complexes[7]

Period I: Early Bronze Age I-II ritual structures

In this article, the structures of Period I, their similarities to contemporary sites, and the function of these structures will be discussed.

Structures and Small Finds

Two plastered pools (Figure 2: b-c), a basalt channel (Figure 2: d), a basalt stairway (Figure 2: k) and four stone-built circular pits (Figure 2: f-i) on the mudbrick terrace represent Period I. The ceramics and small finds from these structures are dated to the Early Bronze Age I-II[8].

Pools

In trenches K-L 9-10, two small plastered pools (Figure 3) were built into the terrace. The northernmost pool is 10.20 m long, 5.40-4.20 m wide and 2.17-1.80 m deep. The base and sides were coated with 3-6 cm lime and gypsum plaster (Figure 13-14). In the plastered sides, there were stiffener niches 1 x 0.30 m placed irregularly 1-2 m apart. One of these niches on the northern side is 2.40 m wide and another one on the eastern side is 2.60 m wide.

The plastered floor is covered with ca. 10 cm of fine clay deposit, accumulated as a result of water, filling the pool. There were a small number of sherds in the deposit, all of which dated to the first half of the 3rd Millennium BC (Figure 7). On top of this deposit lies a thin layer of ash, and this upper fill contains mudbrick rubble and coarse clay, with EBA III-IV sherds. These sherds prove that the pool was no longer used by the middle of the Millennium.

A piece of plastered floor to the south of the pool contains a niche (Figure 2: c) connected to the remaining floor to the south, which belongs to a second pool. The niche is 1x1.60 m and its floor is 2 m deep. In Period II A, a limestone chamber-tomb was built in this pool. This evidence lets us estimate that the second pool must have ceased to be used around the same time as the first one. Although the plastered contours of this pool could not be determined, the rectangular plan of the chamber-tomb enabled a reasonable construction of a rectangular pool of about 5 x 6 m.

[5] Ökse 2004, 221.

[6] Ökse, forthcoming c.

[7] Ökse, forthcoming b.

[8] Engin 2003.

Channel and Stone-Built Pits

On the southern slope in trenches I 7-8, a channel was unearthed (Figure 4) which is 15 m long and was laid in east-west orientation. The side-walls consist of two rows of basalt slabs, 0.68-1.08 x 0.38-0.45 x 0.12-0.23 m in dimension and its bottom is also lined with large basalt slabs. The eastern end of the channel, which is 68-69 cm wide, is covered with large basalt slabs of about 0.86-0.98 x 0.56-0.86 x 0.16-0.19 m. The channel slopes downward to the west, where there is a step (Figure 15); this western end is 42-46 cm wide and 34 cm deep. The channel was built in the mudbrick terrace and the mud bricks at each side were plastered with white lime and gypsum, probably to protect the terrace from the overflow of the channel. The fill in the channel contains a large amount of grains and in Trench I 7 pedestal sherds of coarse fruit-stands with coarsely-incised decoration were found which are dated to the EBA I-II (Figure 8).

In Trench J 8, a hard clay platform was unearthed from 1.07 m under the limestone walls of the middle phase (Figure 5: e, 19). The western section of this platform was destroyed by a robber's pit and the section that is preserved is 1.40 x 0.65 m. Twenty-four small pits filled with ash were uncovered on this section, each with a width of 4-6 cm and a depth of 5-16 cm. In trenches I 8-9, four circular pits were uncovered.

The pit in the western section (Figure 5: f, 16) was destroyed by the construction of a limestone wall in Period II A. The pebble floor of the pit is 1.82 m in diameter; mammal bones were found on its floor. The surrounding area had been covered with a hard clay-plaster, in which five smaller pits were found, each 5-7 cm in diameter; sherds of fruit-stands around the pit are similar to those from the channel (Figure 8).

To the east of this pit another one was found, with a diameter of 1.65 m (Figure 5: g, 16-17). This pit is surrounded by six basalt blocks at the northern edge of the channel and is covered with a basalt slab. Between the covering slab and surrounding blocks a hard clay-plaster was uncovered, which contained four smaller pits full of ash and grains. Under the covering slab, the pit is 0.50 m in diameter and 0.25 m deep. A 20 cm deep soft earth fill under the covering slab contains large amount of grains and under this fill, a finer pebble fill contains mammal bones and sherds of fine ware from the EBA III. Grains and bones were also found between the surrounding basalt blocks. One of the finds from this pit was a flint tool which is a double-sided artefact. While one side was thin and sharp, the other was retouched as a saw.

A third pit to the south of this pit was built in conjunction with the channel construction using large basalt blocks. The pit is 0.75 m in diameter and 0.25 m deep (Figure 5: h, 17), one large basalt slab covers the pit and another slab is at the bottom. The fill between these two slabs contains grains, as does the five smaller pits in the hard clay-plaster between the covering slab and the surrounding blocks, which contain ash as well as grains.

A fourth circular pit construction is in the northwestern section of Trench I 9 (Figure 5: i, 18). The pit was set in a hard clay-plaster of 1.65 m in diameter with seven smaller pits full of ash; basalt blocks surround this area in the south and west. The pit of 0.70-0.71 m in diameter is surrounded by a circular limestone wall and one basalt slab of

80 x 65 cm covers the pit. The pit is 60 cm deep and the uppermost layer is made of 10 cm of pebbles covering a 30 cm deep hard clay layer. Underneath this hard clay layer a soft earth fill covers a white plastered floor, which covers a layer of fine pebble stones and mammal bones covering a coarse pebble substructure. In this lowest layer, a small flat axe (Figure 8) made of greenish granite was found between the stones of the surrounding wall. According to its dimensions of 4.6 x 3.4 x 1.2 cm, it must have been a votive axe. Fragments of unbaked clay figurines from the pit are similar to those from the stairway fill (Figure 9).

Tunnel with Stairs

A basalt structure on the southwestern skirt of the mudbrick terrace was built using rough basalt blocks with dimensions of 0.50-1.50 m in length, 0.60-1.20 m in width and 0.25-0.40 m in thickness; spaces between irregular blocks were filled with smaller stones and rubble. Unfortunately, this structure was heavily disturbed due to soil removal in the 1980s. The basalt blocks had been placed directly on the natural pebble terrace. The southern section of the structure is beneath the surface and was covered with mud bricks.

Between the basalt blocks, a tunnel with stairs was unearthed (Figure 6: k, 20). The tunnel is 58-63 cm wide and 2 m high. The stairs run downward with a slope of 45°. The presence of a single basalt block in the southern section of Trench H 8 indicates that the damaged part must have reached at least that far. Only 12 steps of the lower part of the stairway have survived. The stairs had been built with basalt blocks which were 25 cm wide, 62-63 cm long and 17-27 cm high. The side walls were also built with basalt blocks, which are 1.14 x 0.40 x 0.22 - 1.65 x 0.50 x 0.32 m, and any spaces between irregular thick blocks were filled with smaller stones. The tunnel was covered with large basalt slabs of *ca.* 0.44 x 1.25 x 0.40 m.

The stairway ends in a fine homogene clay debris, which seems to have accumulated because of water. This part of the tunnel is 0.70 m wide. The basalt retaining wall of the southwest terrace (Figure 2: l) was built on this part of the tunnel, directly on a huge basalt slab with a length of 2.40 m and a thickness of 35 cm; the unearthed part of the slab is 50 cm wide. This enormous slab supported the retaining wall and probably covered the underground spring, to which the stairway leads.

The eastern side of the stairway was destroyed. The western side was built directly on the pebble terrace with large basalt blocks of 1.00-1.13 x 56-62 x 30-35 cm. These blocks are preserved as steps in three or four rows with thick mud mortar between them. This construction is *ca.* 2 m wide and runs toward the south with a downward slope of 30°. This slope does not correspond with that of the stairway, so the side structures seem to have been visible from the surface. The preserved length of the tunnel is 9 m; the distance of the damaged section allows for a reconstruction indicating a total length of *ca.* 15 m.

The covering slabs on the lowest step of the stairway were collapsed (Figure 6) and in a later phase, a long limestone retaining wall was built on top of this section. After the collapse, the northern section of the tunnel was filled with rubble, which contained mammal bones, grinding stones, sherds and other small finds (Figure 9). These include

sherds of various vessels dated to the EBA III-IV and fragments of various small finds such as fragments of basalt vessels, a bird-shaped bell, a terracotta wheel and fragment of a bull-shaped figurine. Fragments of unbaked clay figurines among these finds are similar to those found around the stone-built pit in trench I 9.

After the collapse of the tunnel in the middle of the 3rd Millennium BC, the structure must have been no longer used as a passage to an underground water supply.

INTERPRETATION OF ARCHAEOLOGICAL EVIDENCE

The excavations at Gre Virike revealed structures that do not seem to have been built for daily life. The huge mudbrick terrace does not have any installations which could have been used for domestic purposes thus would indicate existence of a settlement. There are no domestic buildings and kitchens etc. dating to the first half of the 3rd Millennium BC.

Pools

Pools were built in several settlements as water reservoirs. Nevertheless, there are no buildings at Gre Virike, which could have point to a settlement. On the other hand, in many temples and palaces of the ancient Near East, washing facilities, pools and libation places were plastered with asphalt, calciumsulphate ($CaSO^4$), or gypsum to protect the mudbrick structures from moisture[9]. The rectangular pools dating to the Ubaid Period at Tell Madhur were plastered with gypsum[10]. Asphalt or gypsum was used in Tell Chuera[11], Tell Bi'a[12] and Tell Asmar[13] in the Early Dynastic II-III periods. At the pit entrances of the Royal Tombs at Ur, similarly-plastered floors with installations for the discharge of waste water were unearthed[14], which must have been connected to the graves. Pools and basins at sanctuaries were frequently interpreted as libation places, such as the basin on the oval platform of Hafaja or the libation altars on the archaic high terrace at Nippur[15].

In Mesopotamia, agriculture was based on irrigation of fields with water from the main rivers by means of channels. On the contrary, in the northern regions agriculture depends on rain. Although there are no ritual texts on rain-cult rituals of the 3rd Millennium BC, Hittite cuneiform sources of the 2nd Millennium BC gives us an idea about the ritual activities for bringing rain, carried out in Anatolia. Hittite texts state sacred pools as installations for spring goddesses[16]. The upper debris of several pools in

[9] Heinrich 1982, 170; Hemker 1993, 12, 40, 66, 109, 124.
[10] Roaf 1984, 120, fig. 5.
[11] Moortgat 1960, 3, fig. 1.
[12] Strommenger 1990, 25, fig. 17.
[13] Krafeld-Daugherty 1994, 98-99.
[14] Woolley 1934, Pl. 12a.
[15] Lenzen 1941, 32-34.
[16] Haas 1994, 627.

the Hittite capital Boğazköy contain a large amount of cult vessels, which were supposed to be remnants of rituals in the course of rain-cult[17]. Hittites dived a dolly or themselves into a river, pool, basin or spring during ceremonies for pleading the weather gods for rain[18].

Only a small number of sherds were found in the lower debris of the pools at Gre Virike, so their function in the course of rain-cult can not be proved. Most probably, they might have been used for libation during several rituals ceremonies.

Channel and Stone-Built Pits

According to the cuneiform texts, offering pits for libation and sacrifice are related to the rituals for purity and evocation[19]. Such ritual pits were believed to be entrances to the netherworld, through which souls and gods came up to the world. These pits were then closed with clay or other substances, following the descent of the souls and gods to the underworld.

Three pits found between stone rows on the southeastern slope of Gedikli Karahöyük show some similarities to those at Gre Virike[20]. Sacrificed animals had been buried in these pits and they were covered with a lime-clay plaster, on which unbaked clay figurines and cups were found. According to the cuneiform texts, offering pits for libation or sacrifice are related to the rituals for purity and evocation[21]. Such ritual pits were believed to be entrances to the netherworld, through which souls and gods came up to the world. These pits were then closed with clay or other substances, following the descent of the souls and gods to the underworld.

The channel with its pits full of ash and grains does not indicate any use of the site as a settlement. There is no evidence of the channel leading to a fountain or to a sewage channel. Even though the stone-built pits contain a handful of grains and animal bones, their shape and depth is not suitable to have been used as granaries. Likewise, the ashy pits surrounding these structures were not built merely as a concidence. These structures show a complex in which water, grains and fire meet together.

Germinating corn was used in Ancient Egypt, symbolising the resurrection of *Osiris* in the month of *Choiak*[22]. During these celebrations figurines of Corn-Osiris and Osiris-beds were shaped using earth and grain; they were either put in royal graves or thrown into the Nile River. The sprouding of the seeds in these figurines or "spreading the bed" symbolised the rebirth of *Osiris* and the vegetation as well. Carbonised remains of cereals in the offering pits and in the basalt channel at Gre Virike may have been the remnants of offerings in the course of fertility-cult, since grain would sprout, when they come together with water.

[17] Neve 1971, 13-19, 31 ff.
[18] Wegner 1978, 403-406.
[19] Loretz 1993, 303.
[20] Alkım 1967, 7-8, fig. 8-9; Alkım and Alkım 1966, 21, 498; Duru 1986, 170 ff.
[21] Loretz 1993, 303.
[22] Erman 1934, 377-378; Raven 1982, 30-33.

According to the ancient Mesopotamian belief, the creator of the world was a fresh water ocean – *apšu/ENKI*, from which ground water, springs and rivers obtain their water[23]. During confirmation rituals the river as creator, was symbolised together with torches and incense[24]. Cedar, pine and cypress were burnt in censors[25], their smoke rose to the sky as messengers to the gods and allowed the souls of the dead come up to the world. At the end of the text of "*Ištar*'s descent to the netherworld", incense is used to call *Tammuz* and the souls of the dead to the world[26].

The function of the platform with small ash-filled pits in trench I-J 8 is not clear, but it could well have been a place to erect torches during rituals. Moreover, the small ash filled pits on the clay plaster covering the stone-built circular pits could possibly have been remnants of incence, in order to call gods and souls for rituals. The channel might have also been a symbolic structure for irrigation channels, such as those built around the Assyrian *Akītu* Temples, to provide water to the gardens[27]. Thus, the channel and stone-built pits seem to have had cultic functions, probably during ritual ceremonies associated with fertility-cult.

Tunnel with Stairs

The tunnel with stairs at Gre Virike leads to an underground spring, which had probably been used as a water source for rituals, on the other hand, this spring-grotto might also have been a sacred spring and an artificial entrance to the underworld. Similar structures at contemporary sites were built with megalithic limestone blocks. These are the structure M 4 on the southeastern skirt of Gedikli Karahöyük[28] and another on the eastern slope of Kırışkal Höyük[29]. The stairway at Gedikli Karahöyük is 7 m long, the one at Kırışkal Höyük is 29 m long, and both of them lead to underground springs.

Wells and underground springs were mentioned as paths to the Underworld in mythological texts[30] such as "*Ištar*'s travel to the netherworld" and "the descent of an Assyrian king to the netherworld". New-Assyrian Texts[31] mention that Assuruballit I and Sennacherib ordered wells to be dug to obtain cool spring water for the irrigation of the *Akītu*-Garden and rituals[32].

After the collapse in the middle of the 3rd Millennium BC, the connection of the stairway-tunnel to the underground spring seem to have been cut off. The fill in the tunnel

[23] Ebeling 1931, 375-376.
[24] Ebeling 1931, 91, 375-376.
[25] Köcher 1952, 2000, n. 16.
[26] Kramer 1973, 85; Penglase 1995, 194.
[27] Heinrich 1982, 276.
[28] Alkım 1966, 42; 1967, 8.
[29] Alkım 1970, 41-42, fig. 15.
[30] Ebeling 1931, 3.
[31] Ebeling 1954, 6, line 16; Oberhuber 1972, 158.
[32] Ebeling 1931, 50, 135; Heinrich 1982, 276.

show that the upper part of the stairway had been used as an offering pit, since the tunnel was combined with the deeper strata of the earth. In Mesopotamia, rituals for driving bad souls and angry ghosts which cause illnesses were held in the steppes[33]. During these ceremonies, figurines symbolising evil and angry souls were buried in a pit, to get rid of their bad effects. The figurines collected in the stairway-fill and in one of the stone-built pits at Gre Virike point to necromantic activities (Figure 9). The figurines have been thrown into the tunnel after the collapse and the uppermost layer of the tunnel-fill contained mammal bones, pointing to a secondary function of the tunnel as an offering pit.

Functional Analysis of the Site

The excavations at Gre Virike revealed structures that do not seem to have been built for daily life. The huge mudbrick terrace does not have any installations which could have been used for domestic purposes which would indicate a settlement. Therefore, the plastered pools could not have been built as water reservoirs for a settlement. And even though the stone-built pits contain a handful of grains and animal bones, they could not have been used as granaries. Likewise the ashy pits surrounding these structures were not built merely as a concidence. The basalt channel with its pits full of ash and grain does not indicate any use of the site as a settlement. There is no evidence of the channel leading to a fountain or a sewage channel. All of this evidence indicates a non-domestic usage of the site.

The archaeological evidence at Gre Virike indicates an open-air sanctuary related to the water cult. These structures can be interpreted as installations for cultic purposes, where water, grains and ash were used as ritual substances. The pools might have been libation places for rain-cult, the channel and the stone-built pits might have been used as offering facilities during renewal ceremonies and the sprig-grotto might have been the source of spring water to be used for libation. Grains in the channel and in some stone-built pits show remnants of fertility rituals, when combined with ash filled pits indicating the use of incence. Thus, the site could well have been used for fertility rituals.

The new year was celebrated in Mesopotamia by the *Akītu* feast at the spring equinox[34]. *Akīt seri* (*Akītu* feast of the steppes) is celebrated in the first month of the year in Spring[35] and celebrations began on the 4th day of *Nisan/Nisannu*[36]. The text on the descent of a New Assyrian king to the netherworld[37] mentions rituals such as libation, sacrifices and incense-burning during this feast.

[33] Tsukimoto 1985: 140-143.
[34] Pallis 1926, 42-43; Sallaberger 1999, 291-294; Pongratz-Leisten 1999, 294-297.
[35] Köcher 1952, 198, Vs 16; Kühne 1993, 267.
[36] Pallis 1926, 27, 30-31, 121, 128; Brinkman et al. 1980, 265b.
[37] Pallis 1926, 144; Ebeling 1931, 2, 7.

Natural springs, rivers and pools were sacred and underground springs were believed to be entrances to the netherworld[38]. Sanctuaries with natural water sources were believed to have the power of magical purification. Thus, most of the festivals were carried out at natural water sources like rivers and springs. The offerings were poured into springs and incence was burned near them.

Structures such as altars, offering chambers and libation places at temples, palace-shrines and monumental tombs were constructed to house these rituals and their offerings. Rituals for rain and fertility, and new year celebrations were held in sanctuaries outside the settlements, near a cave with a spring, a river or an irrigation channel[39]. In the 1st Millennium BC these sancturies became larger and imposing feast houses – the *Akītu* Temples – built outside the city walls, with sacred rooms and kitchens for feast meals, and sacrifies were made in their garden, followed by a ritual meal for the participants[40].

No earlier *Akītu* Temples are known from Mesopotamia; only a building on a relief dating to the 3rd Millennium BC has been interpreted as an archaic example[41]. Gre Virike was also built on a river bank, has a spring-grotto but no dwellings. The site is situated in the middle of the region between Birecik and Carchemish. Within the flooding area of the Carchemish dam nine small sites – all ca. 1-2 ha – are contemporary to Period I[42]. These sites are placed close to Gre Virike – the farest site is ca. 17 km apart, so people could reach the site within three hours at maximum on foot[43]. Therefore, there is no reason not to call Gre Virike as an archaic example of a *bīt ákīt šá sêri* (feast house of the steppes)[44] – an open-air cult place – in Period I. The terrace with its ritual facilities might have been used by the people from these small sites during the first half of the 3rd Millennium BC.

The chamber tomb complexes of Period II A emphasize the ritual character of the site until the end of the 3rd Millennium BC. The relation of the cult of the dead with fertility cult can be observed at Gre Virike. The dead is buried into the earth, similar to the harvested seeds; as seeds sprout out in the Spring, the souls were also believed to come to the world, so the souls of the dead affected the fertility of the earth[45]. Thus, the function of the site as a cult place in the course of fertility cult in the first half of the Millennium became the cult of the dead in the second half. The site was abandoned at the end of the 3rd Millennium BC, indicating a change in the society.

[38] Segal 1970, 48-49, 53-54.

[39] Zimmer 1926, 20; Falkenstein 1959, 147 ff., 151-166; Heinrich 1982, 275-277.

[40] Pallis 1926, 33-35, 39-40; Zimmer 1926, 20; Ebeling 1954, 5-8; Postgate 1974, 59-62, 67; Heinrich 1982, 250.

[41] Moortgat-Correns 1999, 268, 269, 273, fig. 6-7.

[42] Algaze et al. 1994, 12-13, fig. 15C.

[43] Ökse, forthcoming a.

[44] Pallis 1926, 33-40; Zimmer 1926, 20; Ebeling 1954, 5-16; Postgate 1974, 61-67; Heinrich 1982, 249-251.

[45] Tsukimoto 1985: 218-223.

Catalogue of Small Finds

Figure 7:

K9/0051/S: Bowl sherd; northern pool; parallels: Hayaz Höyük (Thissen 1985, fig. 4:14-15, 21-22), Birecik Cemetery (Sertok and Ergeç 1999, fig. 8W).

L9/0014/S: Jar sherd; northern pool; parallels: Tell es Sweyhat (Holland 1976, fig. 10:3), Hayaz Höyük (Thissen 1985, fig. 2:7-8, 6:8-11, 7:A 1-2), Tell Banat Area A (Porter and McClellan 1998, fig. 17:22), Hammam et-Turkman VI east (Lebeau 1997, Pl. 1:14).

K9/0051/S: Bowl sherd; northern pool; parallels: Hayaz Höyük (Thissen 1985, fig. 1:27, 3:27, 4:4), Hammam et-Turkman VI west (Curvers 1988, Pl. 118:1), Tell Banat Area A (Porter and McClellan 1998, fig. 18:8), Birecik EBA Cemetery (Sertok and Ergeç 1999, fig. 8J).

Figure 8:

I8/0036/S/01: pedestals; environment of pit f on Fig. 5; parallels: Carchemish (Woolley and Barnett 1952, Pl. 55c, 56b, 57a-c), Birecik EBA Cemetery (Sertok and Ergeç 1999, fig. 8:A-B, D-F), Horum Höyük (Tibet et al. 2001, 151, fig. 9), Kurban Höyük IV (Algaze et al. 1990, Pl. 73:J-K), Arslantepe VIB (Palmieri 1981, fig. 8:4; Frangipane 2000, fig. 13:18), Taşkun Kale 2-3 (Sagona 1994, 5-11, fig. 23, 55:12).

I9/0044/R/01: Votive Axe; pit i on Fig. 5; parallels: Mersin XI (Garstang 1953, fig. 150:10).

I8/0044/N/01: Flint saw; pit g on Fig. 5.

Figure 9:

G7/0034/S/09: Jar neck; stairway-fill; parallels: Hammam et-Turkman VI west (Curvers 1988, Pl. 120:50), Tall Bi'a "Gruftanlage" (Einwag 1993, fig. 6:19, 23), Tell es Sweyhat (Holland 1976, fig. 9:43-44), Til Barsip "hypogeé" (Thureau-Dangin and Dunand 1936, Pl. XXIII:3), Tawi (Kampschulte and Orthmann 1984, Pl. 10:90), Selenkahiye Tomb N (van Loon and Meijer 2001, fig. 4A.10:25), Halawa Area Q, Level 3 (Meyer 1989, fig. 25:5), Oylum Höyük (Özgen et al. 1997, fig. 15:4).

G7/0034/S/09: Cup; stairway-fill; parallels: Amuq J (Braidwood and Braidwood 1960, fig. 336:23), Tell Hadidi Area C (Dornemann 1977, fig. 17:19; 1988, fig. 13:14-15), Tawi (Kampschulte and Orthmann 1984, Pl. 3:5), Selenkahiye Tomb I (van Loon and Meijer 2001, fig. 4A.i:24), Halawa Area Q, level 3 (Meyer 1989, fig. 24:9).

G7/0034/S/09: Miniature bowl; stairway-fill.

G7/0034/S/01: Bird-shaped bell; stairway-fill; parallels: Strommenger and Kohlmeyer 1998, Pl. 161:4; Meyer and Pruß 1994, fig. 46:318-320; Novak 1994, 117, fig. 89:8.

G7/0034/S/02: Terracotta wheel of model oxcarts; stairway-fill; parallels: Strommenger and Kohlmeyer 1998, Pl. 147:8; Meyer and Pruß 1994, fig. 52; Novak 1994, fig. 89:12-13; Werner 1998, 151.

G7/0034/S/11: Bull figurine; stairway-fill; parallels: Braidwood and Braidwood 1960, fig. 289:2,4; Holland 1976, fig. 15:15; Pruß and Link 1994, fig. 30:6-15; Porter and McClellan 1998, 24, fig. 21:5-11.

G7/0034/S/13 and 15: Unbaked clay figurines; stairway-fill; parallels: Gedikli Karahöyük (Duru 1986).

Bibliography

Algaze, G., Evins, M.A., Ingraham, M.L., Marfoe, L. and Yener, K.A., 1990 – Town and Country in Southeastern Anatolia II. The Stratigraphic Sequence at Kurban Höyük. OIP 110. Chicago.

Algaze, G., Breuninger, R. and Knudstadt, J., 1994 – The Tigris-Euphrates Reconnaissance Project: Final Report of the Birecik and Carchemish Dam Survey Areas. *Anatolica* 20, 1-96.

Alkım, U. B., 1966 – İslahiye Bölgesi Araştırmaları ve Gedikli Höyük Kazısı (1966). *Türk Arkeoloji Dergisi* 15/2, 39-48.

Alkım, U.B., 1967 – İslahiye Bölgesi Araştırmaları. Gedikli ve Kırışkal Höyük Kazıları. *Türk Arkeoloji Dergisi* 16/2, 5-13.

Alkım, U.B., 1970 – Tilmen ve Kırışkal Höyük Kazıları (1970). *Türk Arkeoloji Dergisi* 19/2, 39-50.

Alkım, U.B. and H., 1966 – Gedikli (Karahöyük) Kazısı Birinci Ön-Rapor. *Belleten* 30/117, 1-57.

Braidwood, R. J. and L. S., 1960 – Excavations on the Plain of Antioch I. The Earlier Assemblages. Phases A-J. OIP 61. Chicago.

Brinkman, J.A., Civil, M., Gelb, I.J., Oppenheim, A L. and Reiner, E., 1980 – Chicago Assyrian Dictionary 11: N.

Curvers, H.H., 1988 – The Period VI Pottery. In: Hammam et-Turkman I. 1981-84 Excavations in Syria. Uitgaven, Nederlands Historisch-Archeologisch Instituut te Istanbul 63, (ed.) M. N. van Loon. Leiden, 351-395.

Czichon, R.M. and Werner, P., 1988 – Tall Munbāqa-Ekalte I: Die Bronzezeitlichen Kleinfunde. Saarbrücken.

Dornemann, R.H., 1977 – Tell Hadidi: A Millennium of Bronze Age City Occupation. *Annual of the American Schools of Oriental Research* 44, 113-151.

Dornemann, R.H., 1988 – Tell Hadidi: One Bronze Age Site Among Many in the Tabqa Dam Salvage Area. *Bulletin of the American Schools of Oriental Research* 270, 13-42.

Duru, R., 1986 – Tarihöncesi Çağlarına Ait Dini Bir Tören. *Anadolu Araştırmaları* 10, 169-176.

Ebeling, E., 1931 – Tod und Leben nach den Vorstellungen der Babylonier. Berlin-Leipzig.

Ebeling, E., 1954 – Stiftungen und vorschriften für assyrische Tempel. Deutsche Akademie der Wissenschaften zu Berlin. Institut für Orientforschung, Veröffentlichung 23. Berlin.

Einwag, B., 1993 – Die Keramik aus dem Gruftbereich des Jungen Palastes in Tall Bi'a. *Mitteilungen der Deutschen Orientgesellschaft* 125, 33-50.

Engin, A., 2003 – Orta Fırat Bölgesi'nin Erken Tunç Çağ Seramiği İçerisinde Gre Virike Buluntularının Yeri ve Önemi. University of Hacettepe, Unpublished PhD. Ankara.

Erman, A., 1934 – Die Religion der Ägypter. Ihr Werden und Vergehen in Vier Jahrtausenden. Berlin.

Falkenstein, A., 1959 – Akīti-Fest und Akiti-Haus. In: Festschrift Johannes Friedrich zum 65. Geburtstag gewidmet, (eds.) R. von Kienle *et al.* Heidelberg, 147-182.

Frangipane, M., 2000 – The Late Chalcolithic/E.B. I Sequence at Arslantepe. Chronological and Cultural Remarks from a Frontier Site. In: Chronologies des pays du Caucase et de l'Euphrate aux IVe-IIIe Millenaires, (eds.) C. Marro, and H. Hauptmann. Paris, 436-471.

Garstang, J., 1953 – Prehistoric Mersin. Yümük Tepe in Southern Turkey. Oxford.

Haas, V., 1994 – Geschichte der Hethitischen Religion. Handbuch der Orientalistik. Der Nahe und Mittlere Osten 15. Leiden.

Heinrich, E., 1982 – Die Tempel und Heiligtümer im alten Mesopotamien. Typologie, Morphologie und Geschichte. Denkmäler Antiker Architektur 14. Berlin.

Hemker, C., 1993 – Altorientalische Kanalisation. Untersuchungen zu Be- und Entwässerungsanlagen im mesopotamisch-syrisch-anatolischen Raum. ADOG 22. Münster.

Holland, T.A., 1976 – Preliminary Report on Excavations at Tell es-Sweyhat, Syria, 1973-4. *Levant* 8, 36-70.

Jamieson, A., 1993 – The Euphrates Valley and Early Bronze Age Ceramic Traditions. *Abr-Nahrain* 31, 36-92.

Kampschulte, I. and Orthmann, W., 1984 – Gräber des 3. Jahrtausends im syrischen Euphrattal. 1. Ausgrabungen bei Tawi 1975 und 1978. Saarbrücker Beiträge zur Altertumskunde 38. Bonn.

Koch, K., 1979 – Zur Entstehung der Ba'al-Verehrung. *Ugarit Forschungen* 11, 465-475.

Köcher, F., 1952 – Ein mittelassyrisches Ritualfragment zum Neujahrsfest. *Zeitschrift der Assyriologie* 50, 192-202.

Krafeld-Daugherty, M., 1994 – Wohnen im Alten Orient. Eine Untersuchung zur Verwendung von Räumen in altorientalischen Wohnhäusern. Altertumskunde des Vorderen Orients 3. Münster.

Kramer, S.N., 1973 – Myths and Epics From Mesopotamia. In: The Ancient Near East I, (ed.) J. B. Pritchard. Princeton, 28-86.

Kühne, C., 1993 – Voropfer im alten Anatolien. In: Religionsgeschichtliche Beziehungen zwischen Kleinasien, Nordsyrien und dem Alten Testament. Internationales Symposion, Hamburg 17.-21. März 1990. Orbis Biblicus et Orientalis 129, (eds.) B. Janowski *et al.* Göttingen, 225-283.

Kühne, H., 1976 – Die Keramik vom Tell Chuera und ihre Beziehungen zu Funden aus Syrien-Palästina, der Türkei und dem Iraq. Vorderasiatische Forschungen der Max Freiherr von Oppenheim-Stiftung 1. Berlin.

Lebeau, M., 1986 – Rapport préliminaire sur la deuxième campagne de fouilles à Tell Melebiya (Moyen-Khabour-printemps 1985). *Akkadica* 49, 1-16.

Lebeau, M., 1997 – La céramique de la Maison aux Tablettès (Chantoer B). *Subartu* 3, 65-87.

Leenders, R., 1988 – The Stone Finds. In: Hammam et-Turkman 1. 1981-84 Excavations in Syria. Uitgaven van het Nederlands Historisch-Archeologisch Instituut te Istanbul 63, (ed.) M. N. van Loon. Leiden, 625-640.

Lenzen, H.J., 1941 – Die Entwicklung der Zikkurat von ihren Anfängen bis zur Zeit der III. Dynastie von Ur. Ausgrabungen der Deutschen Forschungsgemeinschaft in Uruk-Warka 4, Leipzig.

van Loon, M.N. and Meijer, D.J.W., 2001 – Graves and their Contents. In: Selenkahiye. Final Report on the University of Chicago and University of Amsterdam. Excavations in the Tabqa Reservoir, Northern Syria, 1967-1975. Uitgaven, Nederlands Historisch-Archeologisch Instituut te Istanbul 91, (ed.) M. N. van Loon. Leiden, 127-222.

Loretz, O., 1993 – Nekromantie und Totenevokation in Mesopotamien, Ugarit und Israel. In: Religionsgeschichtliche Beziehungen zwischen Kleinasien, Nordsyrien und dem Alten Testament. Internationales Symposion Hamburg 17-21. März 1990. Orbis Biblicus et Orientalis 129, eds. B. Janowski, K. Koch, and G. Wilhelm. Göttingen, 285-318.

Mazzoni, S., 1985 – Elements of the Ceramic Culture of Early Syrian Ebla in Comparison With Syro-Palestinian EB IV. *Bulletin of the American Schools of Oriental Research* 257, 1-18.

Meyer, J.-W., 1989 – Die Grabungen im Planquadrat Q. In: W. Orthmann, Halawa 1980-1986. Vorläufiger Bericht über die 4. Kampagne. Saarbrücker Beiträge zur Altertumskunde 52. Bonn, 19-56.

Meyer, J.-W. and Pruß, A., 1994 – Ausgrabungen in Halawa 2. Die Kleinfunde von Tell Halawa A. Schriften zur Vorderasiatischen Archäologie 6. Saarbrücken.

Moortgat, A., 1960 – Tell Chuera in Nordost-Syrien. Vorläufiger Bericht über die dritte Grabungskampagne 1959. Schriften der Max Freiherr von Oppenheim-Stiftung 4. Wiesbaden.

Moortgat-Correns, U., 1999 – Zur ältesten Darstellung eines *bīt akītu* auf einer Reliefstele aus Uruk. *Studi Micenei ed Egeo-Anatolici* 41/2, 259-285.

Neve, P., 1971 – Regenkult-Anlagen in Boğazköy-Hattuša. Ein Deutungsversuch. *Istanbuler Mitteilungen* Beiheft 5. Tübingen.

Novák, M., 1994 – Die Stadtmauergrabung. In: J.-W. Meyer, and A. Pruß, Ausgrabungen in Halawa 2. Die Kleinfunde von Tell Halawa A. Schriften zur Vorderasiatischen Archäologie 6, Saarbrücken, 174-179.

Orthmann, W., 1981 – Halawa 1977-1979. Vorläufiger Bericht über die 1. bis 3. Grabungskampagne. Saarbrücker Beiträge zur Altertumskunde 31. Bonn.

Orthmann, W. and Rova, E., 1991 – Gräber des 3. Jahrtausends v. Chr. im syrischen Euphrattal. 2. Ausgrabungen in Wreide. Schriften zur Vorderasiatische Archäologie 2. Bonn.

Ökse, A. T., 2001 – Excavations at Gre Virike in 1999. In: Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 1999, (eds.) N. Tuna *et al.* Ankara, 263-397.

Ökse, A.T., 2002 – Excavations at Gre Virike in 2000. In: Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2000, (eds.) N. Tuna, and J. Velibeyoğlu. Ankara, 241-285.

Ökse, A.T., 2004 – 2001 Excavations at Gre Virike. In: Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2001. (eds.) N. Tuna *et al.* Ankara, 179-226.

Ökse, A.T. (forthcoming a) – A 'High' Terrace at Gre Virike to the North of Carchemish: Power of Local Rulers as Founders? In: Archaeology of Boundaries: Was There a Carchemish Region in the Early Bronze Age?. Levant Supplementary Series, (ed.) E. Peltenburg. Oxford.

Ökse, A.T. (forthcoming b) – Early Bronze Age Chamber Tomb Complexes at Gre Virike (Period II A) on the Middle Euphrates River. *Bulletin of the American Schools of Oriental Research.*

Ökse, A.T. (forthcoming c) – Early Bronze Age Graves at Gre Virike (Period II B): An Extraordinary Cemetery on the Middle Euphrates River. *Journal of Near Eastern Studies.*

Özgen, E., Helwing, B. and Tekin, H., 1997 – Vorläufiger Bericht über die Ausgrabungen auf dem Oylum Höyük. *Istanbuler Mitteilungen* 47, 39-90.

Pallis, S.A., 1926 – The Babylonian Akîtu Festival. Det Kgl. Danske Videnskabernes Selskab. Historish-filologiske Meddelelser 12.1. Kopenhagen.

Palmieri, A., 1981 – Excavations at Arslantepe (Malatya). *Anatolian Studies* 31, 101-119.

Penglase, C., 1995 – Some Concepts of Afterlife in Mesopotamia and Greece. In: The Archaeology of Death in the Ancient Near East. Oxbow Monograph 51, (eds.) S. Campbell, and A. Green. Oxford, 192-195.

Pongratz-Leisten, B., 1999 – Neujahr(sfest) nach Akkadischen Quellen. *Reallexikon der Assyriologie* 9, 294-298.

Pope, M.H. and W. Röllig, 1965 – Syrien. Die Mythologie der Ugariter und Phönizier. In: H. W. Haussig, Götter und Mythen im Vorderen Orient. Wörterbuch der Mythologie I. Stuttgart, 217-312.

Pope, M.H. and J.H. Tigay, 1971 – A Description of Baal. *Ugarit Forschungen* 3, 117-130.

Porter, A. and McClellan, T., 1998 – The Third Millennium Settlement Complex at Tell Banat: Results of the 1994 Excavations. *Damaszener Mitteilungen* 10, 12-63.

Postgate, J.N., 1974 – The *bit akiti* in Assyrian Nabu Temples. *Sumer* 30, 51-74.

Pruß, A. and Link, C., 1994 – Zoomorphe Terrakotten. In: J.-W. Meyer and A. Pruß, Ausgrabungen in Halawa 2. Die Kleinfunde von Tell Halawa A. Schriften zur Vorderasiatischen Archäologie 6. Saarbrücken, 111-115.

Raven, M.J., 1982 – Corn Mummies. *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* 63, 7-36.

Roaf, M., 1984 – Excavations at Tell Madhur. *Sumer* 43, 108-126.

Sagona, A.G., 1986 – An Early Bronze Age IV Tomb at al-Qitar, Syria. *Abr-Nahrain* 24, 107-119.

Sagona, A.G., 1994 – The Aşvan Sites 3: Keban Rescue Excavations, Eastern Anatolia. The Early Bronze Age. The British Institute of Archaeology at Ankara, Monograph 18. Ankara.

Sallaberger, W., 1999 – Neujahr(sfest) nach sumerischen Quellen. *Reallexikon der Assyriologie* 9, 291-294.

Schmöckel, H., 1938 – Dagan. *Reallexikon der Assyriologie* 2, 99-101.

Segal, J.B., 1970, Edessa. 'The Blessed City'. Oxford.

Sertok, K. and Ergeç, R., 1999 – A New Early Bronze Age Cemetery. Excavations Near the Birecik Dam, SE Turkey. Preliminary Report (1997-98). *Anatolica* 25, 87-107.

Spanos, P.Z. and Strommenger, E., 1993 – Zu den Beziehungen zwischen Nordwestanatolien und Nordsyrien/ Nordmesopotamien im III. Jahrtausend vor Christu. In: Aspects of Art and Iconography: Anatolia and its Neighbours. Studies in Honor of N. Özgüç, (eds.) M. J. Mellink *et al.* Ankara, 573-578.

Strommenger, E., 1991 – Ausgrabungen in Tall Bi'a 1990. *Mitteilungen der Deutschen Orientgesellschaft* 123, 7-34.

Strommenger, E. and Kohlmeyer, K., 1998 – Tall Bi'a/Tuttul I: Die altorientalischen Bestattungen. Saarbrücken.

Suleiman, A., 1984 – Excavations at Ansari-Aleppo for the Seasons 1973-1980. Early and Middle Bronze Ages. *Akkadica* 40, 1-16.

Thissen, L.C., 1985 – The Late Chalcolithic and Early Bronze Age Pottery from Hayaz Höyük. *Anatolica* 12, 75-130.

Thureau-Dangin, F. and Dunand, M., 1936 – Til-Barsib. Bibl. Arch. Hist. 23. Paris.

Tibet, A., Marro, C. and Bulgan, F., 2001 – Horum Höyük 1999 Çalışmaları. *22. Kazı Sonuçları Toplantısı I*, 137-154.

Tsukimoto, A., 1985 – Untersuchungen zur Totenpflege (kispum) im alten Mesopotamien. AOAT 216. Neukirchen-Vluyn.

Wegner, I. 1978: 'Regenzauber im Hatti-Land'. *Ugarit Forschungen* 10, 403-409.

Werner, P. *et al.*, 1998 – Tall Munbāqa. Bronzezeit in Syrien. Hamburger Museum für Archäologie und Geschichte, Veröffentlichung 80. Hamburg.

Wiggins, S.A., 2000 – The Weather under Baal: Meteorology in KTU 1.1-6. *Ugarit Forschungen* 33, 577-598.

Woolley, C.L., 1914 – Hittite Burial Customs. *Liverpool Annals of Archaeology and Anthropology* 6, 87-98.

Woolley, C.L., 1934 – Ur Excavations II: The Royal Cemetery. A Report on the Predynastic and Sargonid Graves Excavated Between 1926 and 1931. London.

Woolley, C.L. and Barnett, R.D., 1952 – Carcemish. Report on the Excavations at Jerablus on Behalf of the British Museum. Part III: The Excavations in the Inner Town. London.

Zimmer, D.H., 1926 – Babylonische Neujahrsfest. *Der Alte Orient* 25/3, 3-28.

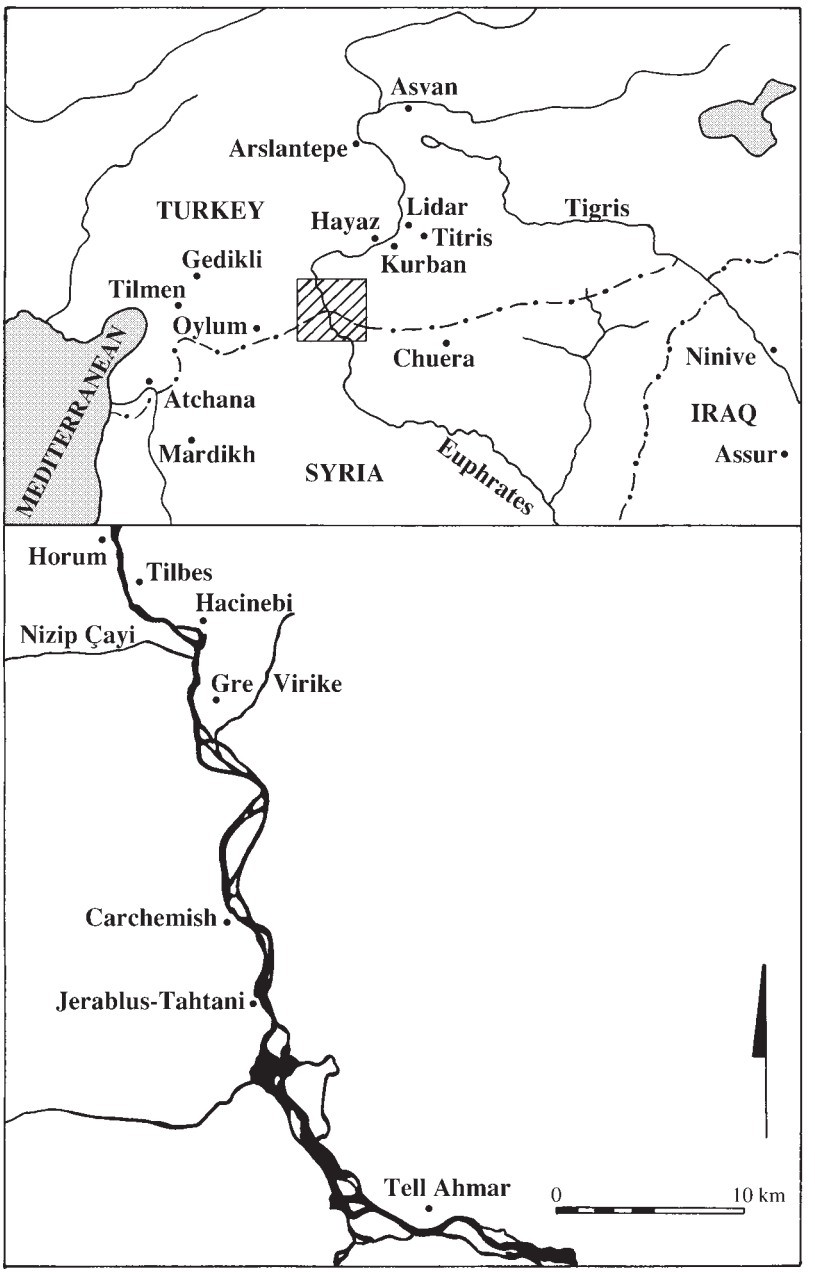

Fig. 1. Location of Gre Virike.

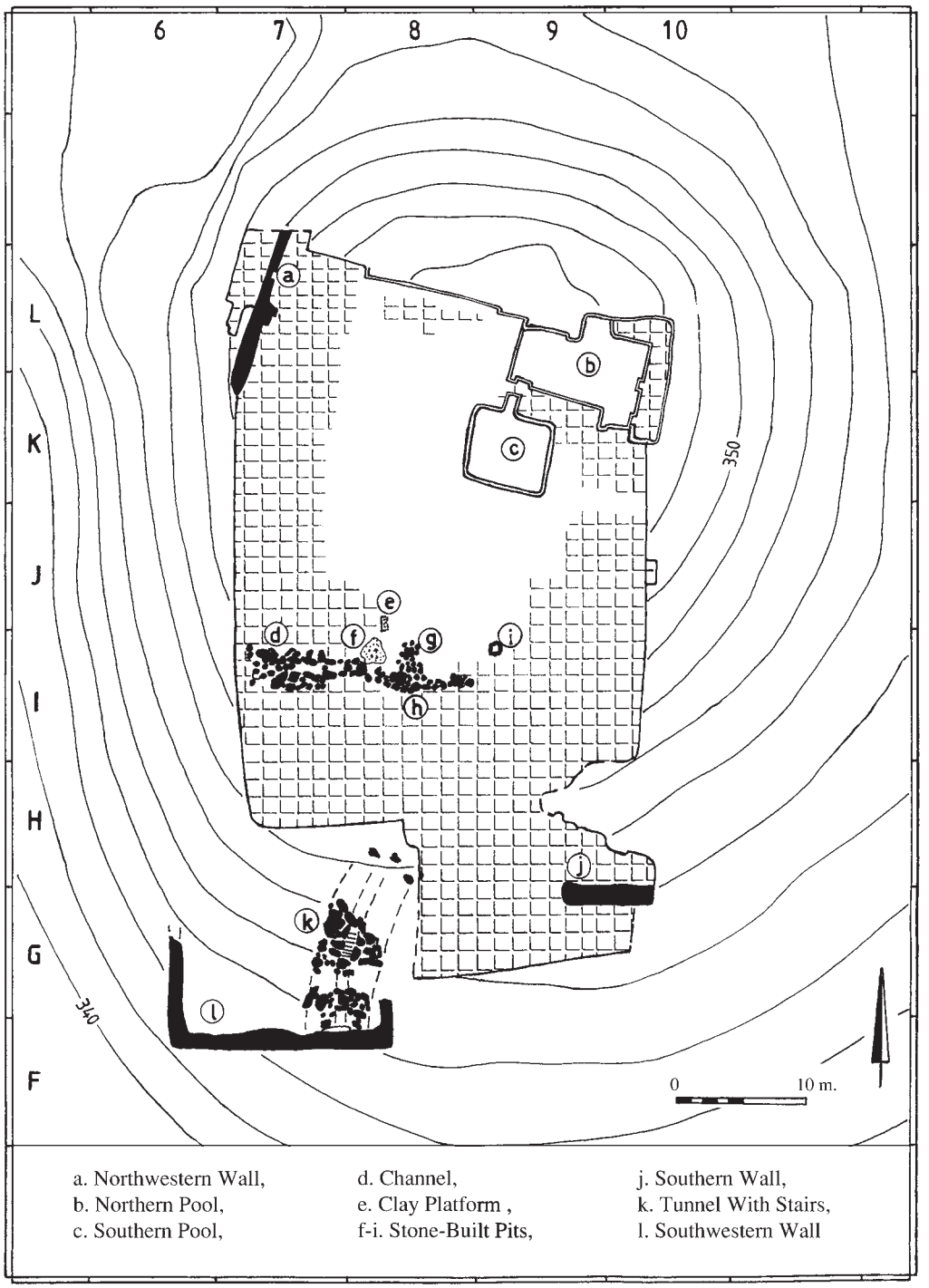

Fig. 2. Schematic Plan of Period I.

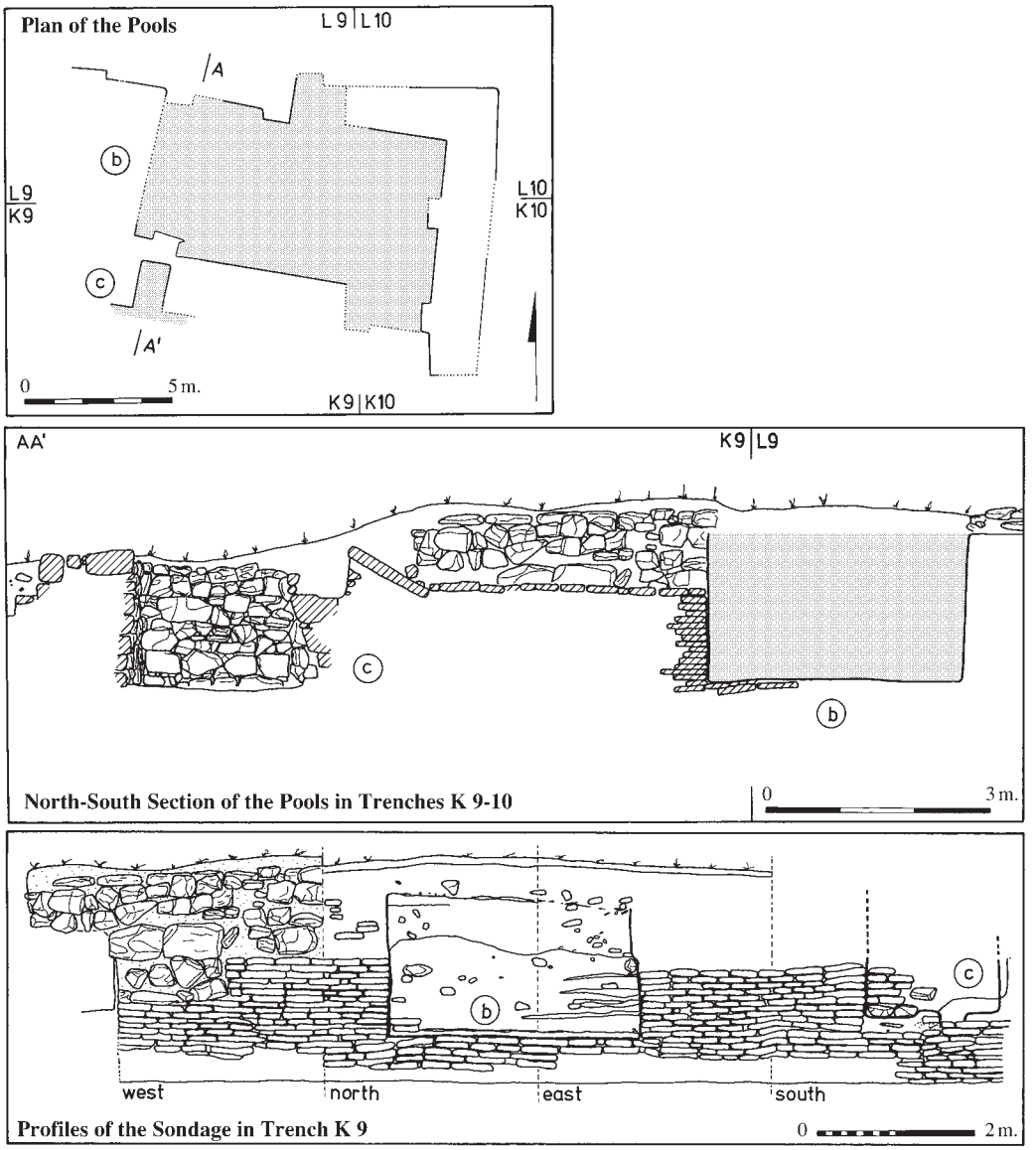

Fig. 3. Plan, section and profiles of the Pools.

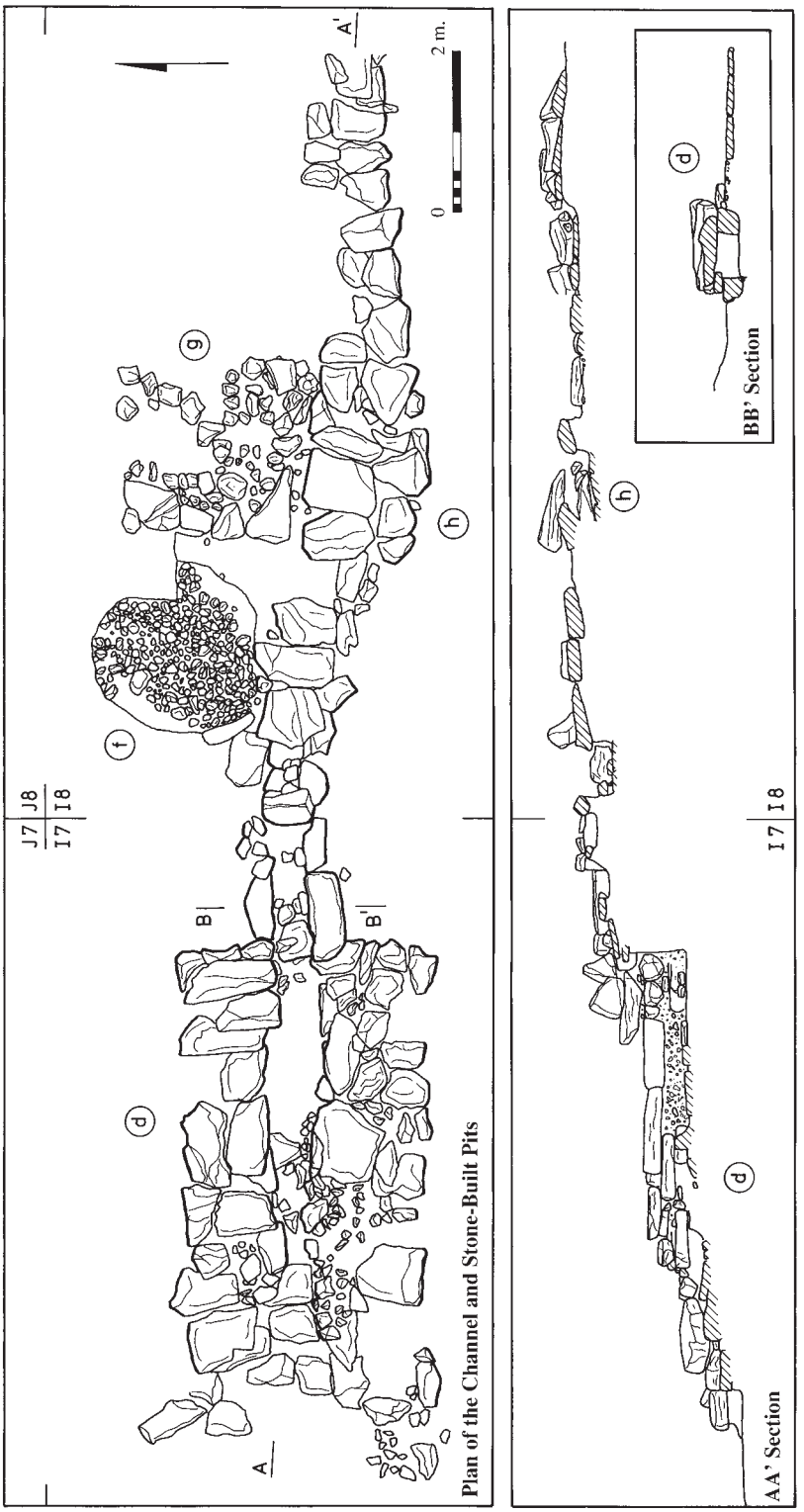

Fig. 4. Plan and section of the Channel.

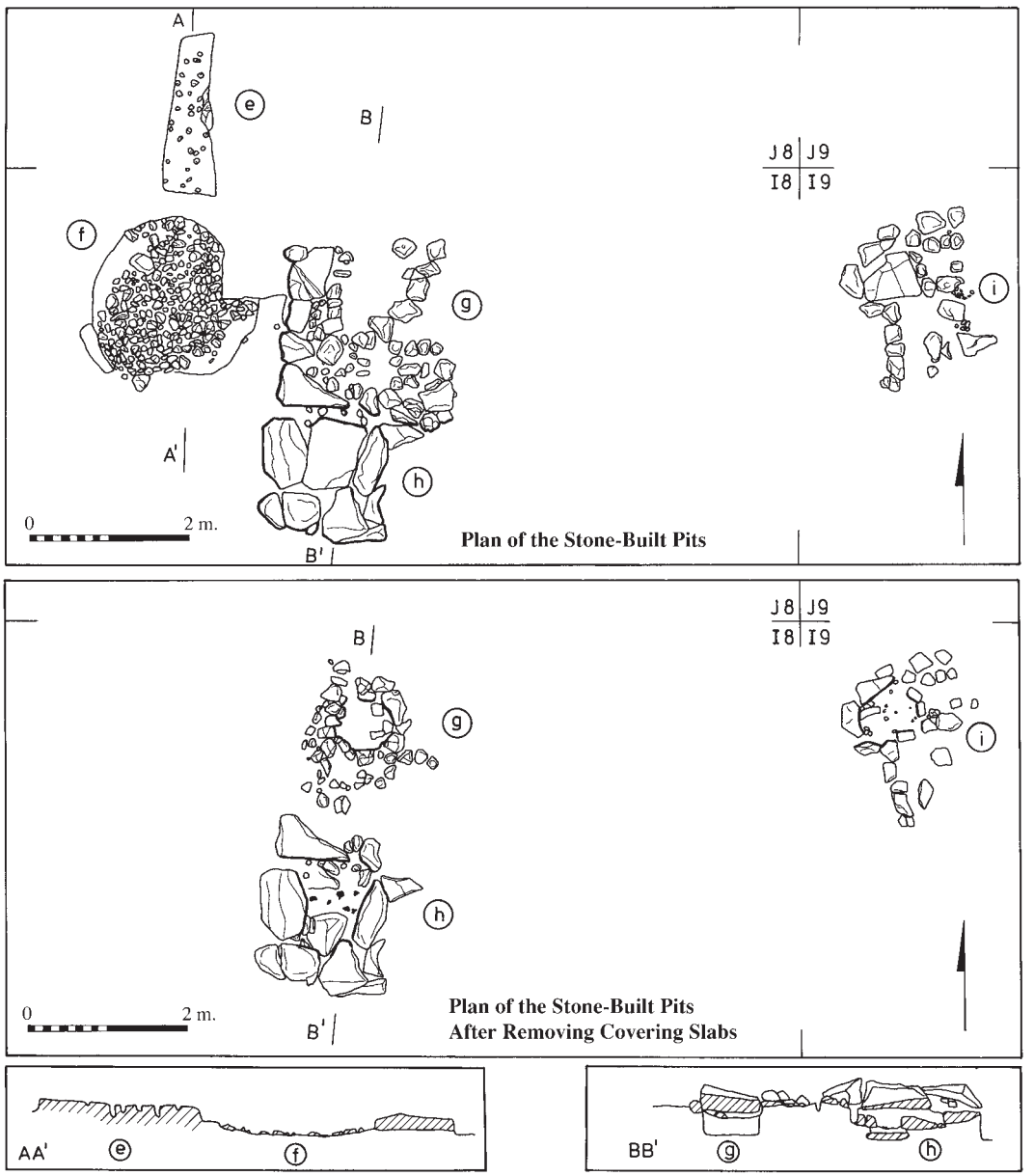

Fig. 5. Plan and Sections of the Stone-Built Pits.

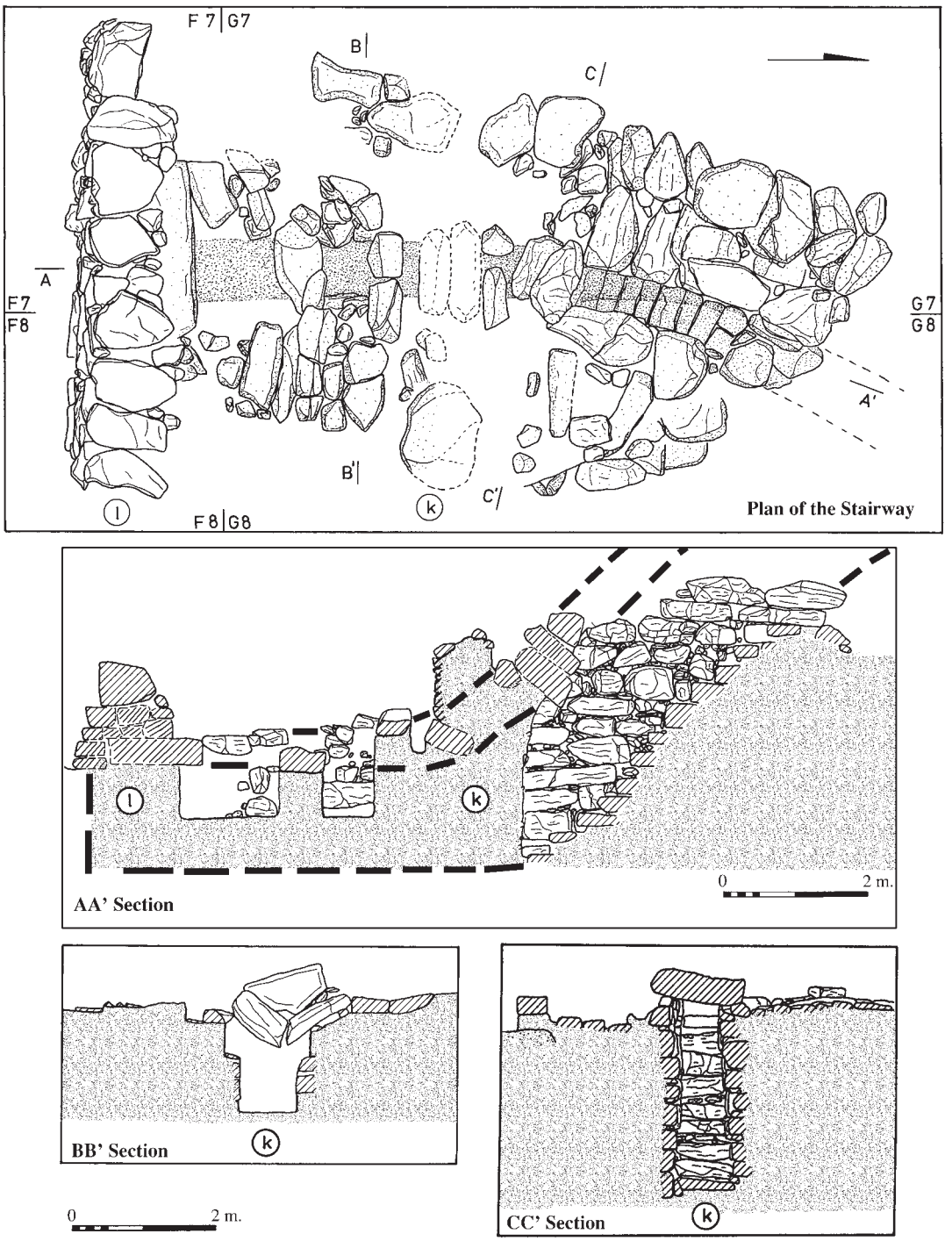

Fig. 6. Plan and Sections of the Tunnel with Stairs.

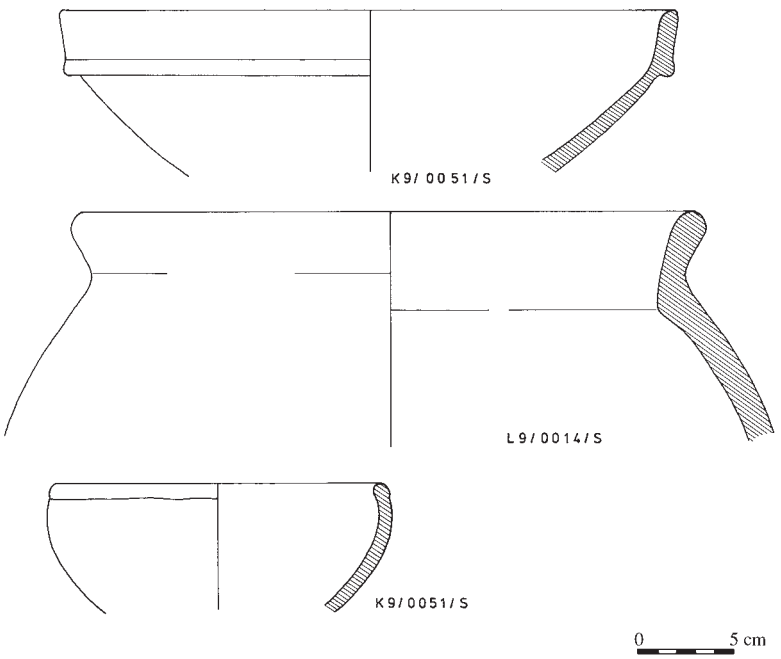

Fig. 7. Small Finds from the Northern Pool.

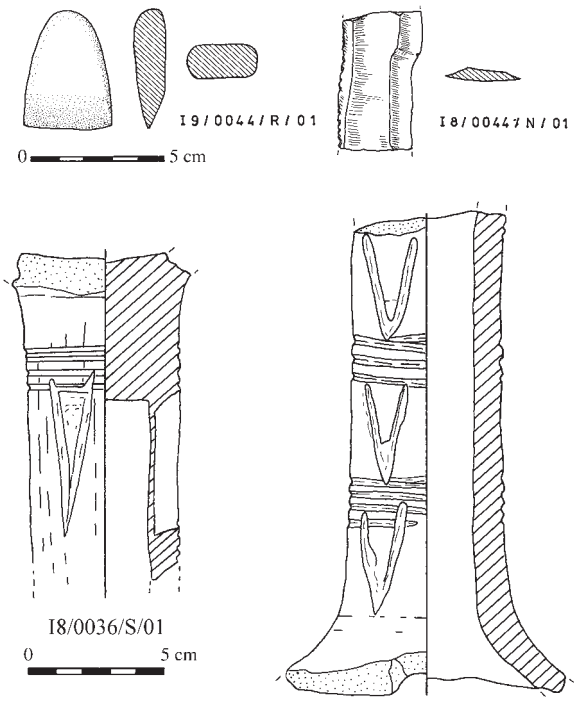

Fig. 8. Small Finds from the Stone-Built Pits.

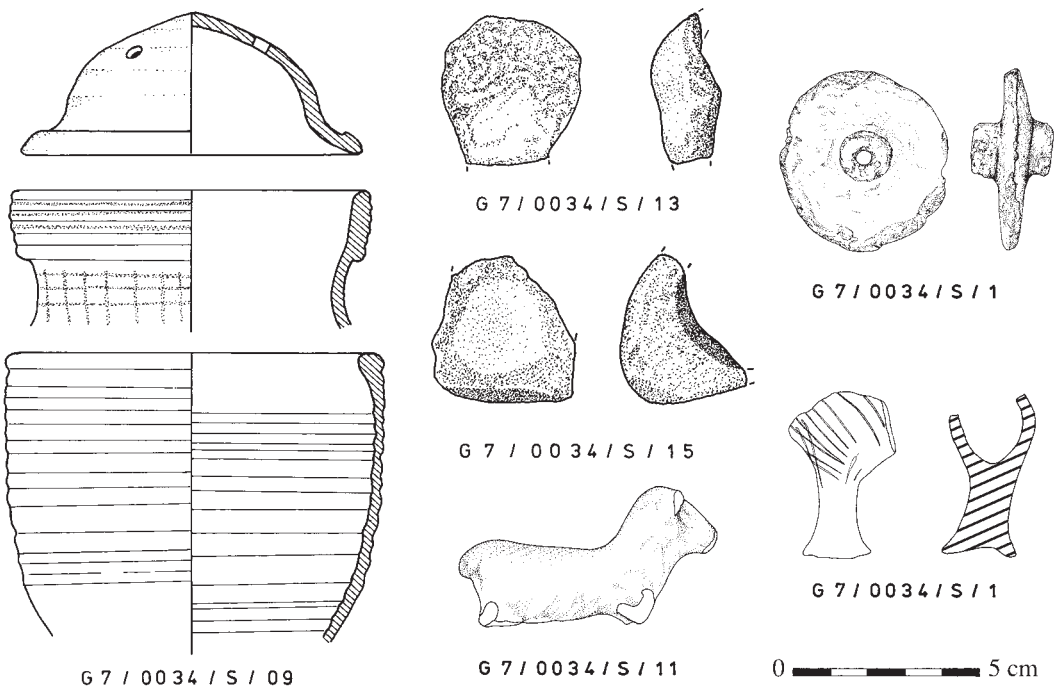

Fig. 9. Small Finds from the Stairway Fill.

Fig. 10. General View from South.

Fig. 11. General View from West.

Fig. 12. Western Section of the Mudbrick Terrace and Retaining Walls.

Fig. 13. Section of the Northern Pool in Trench K 9.

Fig. 14. Plastered Floor of the Northern Pool in Trench K 9.

Fig. 15. Western Section os the Channel in Trench I 7.

Fig. 16. Stone-Built Pits in Trench I 8.

Fig. 17. Stone-Built Pits in Trench I 8.

Fig. 18. Stone-Built Pit in Trench I 9.

Fig. 19. Clay Platform in Trench J 8.

Fig. 20. Tunnel with Stairs in Trenches G 7-8.

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THE 2002–2005 EXCAVATION SEASONS AT ÇADIR HÖYÜK
The Second Millennium Settlements

Ronald L. Gorny[*]

I. General Introduction

The 2002 through 2005 seasons at Çadır Höyük were related in purpose as they continued to explore the historical and cultural development of this large mound near the village of Peyniryemez in Central Turkey (Fig. 1). Our efforts were aimed at resolving outstanding chronological problems, examining significant historical issues, and illuminating the relationship of the environment to settlement in the various periods under investigation. This paper will address these issues and serve to update the reader on current discoveries, as well as changes in our thinking that have taken place in recent years. Funding for the project during the 2003-2005 seasons came as a result of generous donations from both public and private donors to whom we are extremely grateful.[1]

Excavation took place in all six areas of Çadır Höyük during that three year span with second millennium remains coming from every area (Fig. 2). Sites of excavation include Area 1 (the east slope), Area 2 (the terrace), Area 3 (the southern exposure), Area 4 (the citadel), Area 5 (the upper south slope), and in Area 6 (on the northern slope). The excavation team once again enjoyed hospitable surrounding at our excavation house in the village of Peyniryemez, and the project was sustained during this period by workers from Peyniryemez who made up an excellent field team.[2] The project also profited greatly from the expertise and tireless efforts of our Turkish government representatives during this three year span. The representatives included Mr. Mehmet Demir (2003), Mr. Dursun Çalar (2004), and Mr. Ismail Sarıpınar (2005).

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[2] Members of the excavation team from 2002 through 2005 included the Senior Staff, Ronald Gorny (Director), Gregory McMahon (Associate Director), Sharon Steadman (Field Director), Samuel Paley (Assistant Director), Carol Schneider (Byzantinist and House Manager), and Bruce Verhaaren (Regional Survey Director). Excavators and specialists included Chad Bouffard, James Carlson (Lithics), Marica Cassis (Byzantinist), Amy Chang, Rob Cochrane, Tim Fortin, Claudia Glatz (Hittite Ceramics), Peter Graves (Iron Age Ceramic Project), Sarah Jones, Lisa Kealhofer (Iron Age Ceramic Project), Mary Jean Hughes, Amy Lloyd, Juliana McKittrick, Megan McMahon, Janet Meiss, Emilee Novak, Holly Oyster, Jenni Ross, Katie Ross, Aaron Smith, Alexia Smith (Paleobotanist), Gail Thompson, and Yukiko Tonoike.

In previous seasons, a great deal of effort was focused on Çadır's Chalcolithic settlement which took the history of the site back to roughly 5200 B.C. During the 2002-2005 campaigns, however, our attention also turned to the Byzantine areas and we made excellent progress in exposing the Late Classical settlement that once covered the top of the mound and the lower terrace. The Chalcolithic work is published in earlier volumes of *Anatolica*, while the Byzantine efforts are briefly reported on in several Oriental Institute publications (Gorny *et al.* 2002; Gorny 2004, 2005). A fuller description of the Byzantine investigations is in preparation.

The primary emphasis of this article is to briefly describe discoveries related to the second millennium at Çadır Höyük and to discuss their significance for understanding the rise and expansion of Hittite culture on the central plateau of Anatolia. As a byproduct of these investigations, we have reached a point where we believe that it is possible to hypothesize the identity of the second millennium settlement. In that vein, we would now like to propose the equation of Çadır Höyük with the Hittite cult site of Zippalanda, the center for the worship of the Stormgod of Zippalanda. In addition, I believe that there is evidence the settlement was connected by way of its cult to the nearby mountain of Çaltepe, referred to by the Hittites as Mount Daha, the "beloved mountain of the Stormgod of Zippalanda" (Fig. 3).

According to the bronze tablet found at Boğazköy in 1986, Zippalanda was one of the three most important Hittite cult centers (along with Hattuša and Arinna). Daha is known from texts to have played an integral part in the town's cult activities.[3] Both city and mountain were central to important cultic functions performed by the Hittite king at specific times of the Hittite cult calendar. Of utmost importance in this cycle of seasonal worship were festivals that took place in Zippalanda. Among these were events such as the AN.TAH.ŠUM and *nuntariyashas* festivals, celebrations performed in the spring and autumn respectively. I believe that we can now look to the combined sites of Çadır Höyük and Çaltepe to better understand those events.

Previous preferences, my own included (Zippalanda and Ankuwa: The Geography of Central Anatolia in the Second Millennium B.C. *Journal of the American Oriental Society* (1997): 117: 549-557), placed Zippalanda at Kuşaklı Höyük near Kerkenes Dağ. Although I initially proposed this equation in 1990 (Alişar Höyük in the Second Millennium B.C., Ph.D. dissertation, University of Chicago, pp. 433-434), recent discoveries have caused me to reconsider central Anatolia's geography in the second millennium and to now identify Kuşaklı with the important Hittite town of Hurranassa, allowing Çadır Höyük to be identified with Zippalanda. This has had the spin-off effect of maintaining the identification of Alisar Höyük with Ankuwa and identifying the nearby site of Salur Höyük with ancient Katapa (below).

The cult that evolved around the Stormgod of Zippalanda was one of the most important religious institutions in Hittite Anatolia and it certainly predated the Hittite

[3] H. Otten, Die Bronzetafel aus Boğazköy. Wiesbaden, (STBoT Beiheft 1), 1988. See Col III, p. 61-64 with commentary on p. 52.

state. Most of what we know about Zippalanda and its cult are from primary sources collected in M. Popko's book on Zippalanda.[4] The primary sources are principally cuneiform tablets uncovered in the ruins of the Hittite capitol of Hattuša (above) and published either as KBo or KUB volumes[5]. From these texts we know a great deal about the town's topography, as well as its cultic activities. They tell us that the festivities surrounding the cult were not limited to one time of the year but required diligent service throughout the entire year and were highly orchestrated. These activities also required the direct participation of the Hittite king several times throughout the course of the year. By arriving at the belief this past year that Zippalanda and Çadır are one in the same place, we are also led to believe that we will soon be able to establish a productive linkage between the texts and Çadır's physical remains.[6] With that word of introduction we can now turn our attention to the various areas of Çadır Höyük that have produced second millennium materials.

II. The Eastern Trench (Area 1)

The Eastern Trench is the most complicated of the areas producing evidence from the second millennium. Efforts in this area go back to the initial excavation season of 1994 and have clearly demonstrated that Çadır is basically a massive Hittite settlement with a classical crown and a prehistoric foundation. The Eastern Trench is now 40 meters long and provides us with an excellent opportunity to explore Çadır's chronological sequence in an area that displays evidence of settlement from, at least, the Chalcolithic through the Late Bronze Age periods.[7] The major period of occupation, however, is the second millennium and the majority of our work in the Eastern Trench has, therefore, focused on the Hittite periods.

The initial investigations in 1994 produced architectural evidence in the form of walls 6 and 7 in the lower portion of trench 800.930 (Gorny *et al.* 1995c). Wall 7 turned out to be the oldest of the second millennium walls and is build directly over EB III wall F 42. The wall F 7 foundation was composed of large field stones and the orientation of the wall originally seemed odd in that it ran southwest to northeast, an orientation that led directly into the mound instead of around it or parallel to it. Because of this fact, we came

[4] M. Popko, Zippalanda: Ein Kultzentrum in hethitischen Kleinasien (Texte der Hethiter 21. Heidelberg: Universitätsverlag C. Winter, 1994 (reviewed by R. L. Gorny, Zippalanda and Ankuwa: The Geography of Central Anatolia in the Second Millennium B.C. JAOS 117 (1997): 549-557).

[5] KBo is an abbreviation for Keilschrifttexte aus Boghazköi and KUB is the abbreviation for Keilschrift-Urkunden aus Boğazköy.

[6] This should also aid us in tracing the roots of the Stormgod's cult much further back into the earliest periods of the mound's history and connecting that evidence with the areas of the mound where we are uncovering evidence of the cult's earliest existence.

[7] I would remind readers of this article that excavation began in the Eastern Trench primarily as a salvage operation in 1994 when there was fear that water from the lake growing behind the newly built Gellingüllü Dam might engulf much of the site itself (Gorny 1994, Gorny *et al.* 1995). Excavation, therefore, began on the lower half of the mound instead of the top as is traditional. Since that time we have worked our way up the mound instead of down and this may account for some confusion on the part of a reader who is trying to figure out our excavation strategy.

to believe that this might be part of a construction that included a gate and processional way leading into the upper city[8]. This was reinforced in 2002 by the discovery of structure F 32 further inside the mound that may be connected with wall F 7 (below).

Wall F 20 was first uncovered slightly up the slope from F 6 and F 7 in 2001 and although this structure is built of much larger stones than either F 6 or F 7, it is apparently a much narrower wall, unless it too turns out to be a casemate-style wall like its predecessor (Gorny *et al.* 2002). Wall F 20 enclosed a Middle Bronze/Old Hittite transitional settlement that was apparently consumed in a conflagration characterized by reddish burned mudbrick that was strewn down the slope beneath the wall. While we have only excavated wall F 20 along the east side of the mound, a small defile observable along the slope traces the path of the wall as it skirts much of the northern slope with the characteristic red burned mudbrick littering the slopes below.

Wall F 5 lies about 1 m above wall F 20 and, while dating was uncertain at the time of its discovery (Gorny *et al.* 1995c), we now know that the structure is part of the early Old Hittite complex. The wall enclosed half of a room that seemed to stand alone on the edge of the mound when first uncovered in 1994 (Gorny *et al.* 1995c). It now seems that the room we found was actually inside the citadel wall (wall F 20) and dated to approximately the same period as that wall since it would have been below and outside of newly discovered wall F 68 which seems to date to the 15th century (below). There are two theories regarding the situation of this structure. On the one hand, one could imagine that wall F 5 was once connected to the superstructure of wall F 20 when both were in use, but that the connection was lost when wall F 20 collapsed (or was deliberately destroyed). On the other hand, since wall F 5 displays no evidence of the massive fire that clearly destroyed wall F 20, it seems more likely that the room delineated by F 5 was somewhat later in date, perhaps. being part of a rebuild that took place soon after wall F 20 was destroyed.

In 2002 we recommenced work in square 800.930 that was designed to further articulate the area around walls F 6 and F 7. We had not worked there since 1994 and the reclamation of the walls excavated in the initial season allowed for a new appraisal of the relationship between those walls and wall F 20 (above). Soon after excavation began, we discovered that there was a beneficial result from the erosion occurring along the square's southern balk. While we were unable to see any connection between walls F 6 and F 7 in 1994, the erosion of the trench's southern baulk gave us an extra meter of area to study, and within that area we could see that the walls either met or crossed (Fig. 4). After investigating the two walls, we determined that wall 6 was built over wall 7. A wall corresponding to wall 7 was expected on the north side of the passageway, but though we

[8] When wall 7 was first uncovered in 1994, we found a large stone monolith resting on it and near the area we believed to be the entryway. This is reminiscent of Alişar where another monolith was found in a similar situation (von der Osten 1937: 8). Time did not allow us to articulate the wall or to investigate the monolith at that time, but we thought that this large stone could be part of the gate, or even a Hittite "huwaši" stone. This feature was among the factors that drew us back to re-explore the area in 2001 and 2002. As the wall was cleared again, we found the large monolith still resting precariously over its eastern edge. A small circular area in the stones of the addition may represent its original resting place.

were able to determine that the surface associated with wall F 7 had once been heavily plastered, we did not find the northern counterpart of that wall in either 2002 or 2003.[9] The plaster is presumed to be part of the roadway into the town that had been laid directly over EB III wall F 42-F 43 and which lipped directly up to wall F 7 (Fig. 5). The corresponding north side of the gate must still be buried in the bulk further north of the trench.

Initially we thought that Wall F 6 was a simple stone wall about 1 meter in width that had been built to close off the gateway in the succeeding period. Investigations during the following seasons, however, indicated that this wall was, in reality, the front (exterior) face of a large 6 m wide casemate-style wall. The back (interior) side of the wall can be seen built into the slope of the mound, about 1.50 m higher than the exterior face. The overall project seems to have been done in various stages of construction beginning with an initial phase in which the lower part of the casemate was filled with ash, presumably from the wall F 7 destruction. The final product clearly covered the remains of Wall F 7 which we now date to the Old Assyrian Colony Kārum II period. Wall F 42-43 is apparently dated by the ceramic sequence to the EB III period, though it could conceivably correspond to the Kārum Kaniš III-IV period.

Important work was undertaken in a sounding behind wall F 20 during both the 2002 and 2003 seasons (Fig. 6). In 2002 we decided to work behind wall F 20 as a means of retrieving a vertical picture of the area. A small 2 x 2 m sounding was established directly behind the wall and in this exposure was discovered a thick Middle Bronze Age occupation that existed prior to the construction of the large circuit wall F 6. Excavations in this sounding revealed the corner of a significant building, perhaps a tower. The structure is designated as wall F 32 and is characterized by door F 39 which is blocked up but which would have once given the inhabitants entry to the structure from inside the city. The construction is situated on the slope beneath the level of the F 6 casemate wall and is on the same orientation as wall 7, suggesting it may have been part of the early Karum II period gate system we have proposed for wall F 7. The whole structure was covered with soil prior to the construction of the large circuit wall of which F 6 is but one segment. Below F 32, and sitting on a lower manifestation of the slope, we also uncovered wall F 40. This structure was associated solely with EB III pottery and is probably contemporary with EB III fortification wall F 42 situated beyond the perimeter of casemate wall F 6.

Several carbon samples were retrieved during the course of this project which provided us with radiocarbon dates for the area behind wall F 20. These samples came from the matrix into which wall F 20 was dug (i.e. the top of wall F 6) and indicate a date of ca. 1750, so based on that date, Wall F 20 (and wall F 5) must, therefore, represent a later (possibly Kārum Ia period) settlement with wall F 6 dating to the Kārum Ib period and wall F 7 (along with F 32) representing an even earlier (Kārum II) manifestation. Wall F 42-43, along with structure F 40, are most likely dated to the EB III which fits extremely well with the pottery sequence found in the sounding behind wall F 20.

[9]We did expose a small portion of an apparently unrelated wall in the northwest corner of the trench.

Excavations in 2004 and 2005 took place somewhat higher in trench 800.920 (Fig. 7). This project has produced several rooms that are apparently inside the city, as well as pit F 41 which yielded interesting materials including an interesting 8-knobbed pot (Fig 8), an inscribed bone inlay (Fig. 9), and part of a bone flute. An Old Hittite stamp seal was also found in the trench (Fig. 10), along with a small stone bull figurine which is almost identical to ones found at Alişar (Fig. 11).[10] Just outside the structure's exterior wall was a step or bench on which pottery had once been set. Numerous vessels were found strewn in front of the bench and with parallels from Alişar, Maşat, and Ferzant (Glatz, forthcoming), the pottery can confidently be placed in the early Old Hittite period (Figs. 12-13).[11]

Taking into account the c14 date of 1750 (above) for the sample taken from the level directly below this building (the matrix into which wall F 20 was set), it would not be unreasonable to understand this pottery as dating to approximately the same period, and maybe just slightly later, ca 1700–1650 BC. This fits rather well with the suggested date of ca. 1700–1650 BC for the stamp seal which is similar in style to others that predate the emergence of the Hittite Old Kingdom across central Anatolia and also seems to fit into the framework of dates from the latest Dendrochronological studies for central Anatolia.[12]

A few meters above these rooms in trench 800.910 we uncovered the remains of an Old Hittite period wall F 68 that may date to the 15th century and which may also be contemporary with wall F 26 in Area 3 (below). F 68 appeared during the last few days of the 2005 excavation season and is still in the preliminary stages of excavation. At present, the wall is at least 4 m. thick. Its composition seems to be mostly rubble fill inside a mudbrick casemate, though a casemate design is only speculative at this point because of incomplete excavation. The fill is composed of materials that seemingly date to the 15th century, but with the uncertainty of dating in the Hittite ceramic repertoire, its possible that there may be later materials in the mix and that the wall could date to the earliest part of the Hittite Empire period.

Not surprisingly then, Hittite Empire period materials have come in some abundance from areas higher up the slope and because there is still a thick layer of Hittite material above this wall, I suspect that wall F 68 is early and will be followed by a later Hittite Empire period wall that should prove to be contemporary with and connected to the Monumental gate on the mound's north slope (below). Although the Hittite materials

[10] I believe that a bull figurine found in lower portions of the Old Hittite temple confines is significant. Since the Stormgod of Zippalanda is probably worshipped n the form of a bull, the bull figurine most likely represents the Stormgod of Zippalanda. The fact that an almost exact parallel was found at nearby Alişar physically suggests that the same cult is represented in both sites and since we know from the texts that the Stormgod of Zippalanda was also worshipped at Ankuwa (Alişar), it provides tangible evidence for what the texts already attest to, the worship of the Stormgod of Zippalanda in both Zippalanda and Ankuwa.

[11] In fact, the entire material culture is very similar to what von der Osten found at Alişar for this period, so what we find at Çadır Höyük may well tell something about what happened at Alişar in the subsequent Hittite Empire period which is poorly represented in that site's excavated materials (cf. Gorny 1990, 1996b).

[12] Maryanne W. Newton and Peter Kuniholm, A Dendrochoronological Framework for the Assyrian Colony Period in Asia Minor, *TÜBA-AR* VII 2004: 165-176

are covered by Byzantine, Hellenistic, and Iron Age materials, the heavy admixture of Hittite pottery in those remains may indicate that Hittite levels are not far below.

III. The Terrace (Area 2)

Work on the terrace was confined to the sounding first established in 2001. Work here was intended to document the chronology of the terrace and to explore the possible existence of a Kārum-style settlement in the area adjacent to the main mound. Initial results yielded only classical materials, but after digging through a sterile layer of soil, the project produced a fill layer composed of pottery from both the Old Hittite and Middle Bronze Age periods. A small round installation lined with Old Hittite pottery was found 3.5 m below the surface and this renewed expectations that we may eventually find the remains of an Assyrian commercial establishment there. Further work will be needed, however, to determine the extent and significance of second millennium settlement on the terrace.

IV. The Lower Southern Exposure (Area 3)

Limited work was done in the Lower South Trench after the 2001 season. It remains clear, however, that Phrygian builders cut into the earlier Hittite remains in this area, destroying much of the second millennium architecture. This area was also the site of the so-called "Hittite House" which was uncovered in 770.880 (Gorny 2002:116) and the place where we discovered what is presumed to be a silo in 770.890 (Gorny 2002:112). With the discovery of a cylinder seal dating to approximately 1400 BC in this same area (Gorny 2002: 116), we have come to believe that this was a storage/administrative area and that the "Hittite House" with a large bottle found leaning against the wall *in situ* is only part of a larger magazine or storage complex that we know from Hittite texts existed at Zippalanda.

V. The Citadel (Area 4)

The citadel itself, up to this point, has yielded little in the way of Hittite remains, ostensibly because of the thick layer of Byzantine and classical period remains overlying them. Nevertheless, there are hints of what is to come. It appears from the section at the top of the Eastern Trench, for instance, that the Byzantines filled the area with at least a meter of soil in order to level the crest of the mound and then built their own buildings into that matrix. Somewhere below this fill level lies what we believe to be the citadel of the Hittite Empire period settlement. Hittite ceramics are common in the soil excavated from the upper level of the Eastern Trench, and, although a Hellenistic and/or Iron Age level may also intervene, we expect the last Hittite Empire period level to appear before much longer. Knowing as we do from Popko's analysis of Zippalanda's topography in the Hittite texts, we believe that a temple dedicated to the Stormgod of Zippalanda lies not far below, on the highest part of the citadel, and we fully expect to find remains of that

structure somewhere beneath the Byzantine and classical remains.[13] Continued Excavation at the top of the Eastern Trench in 2006 should tell us exactly how far down that will be.

VI. The Upper South Slope (Area 5)

Squares 790.890 and 780.890 were originally opened in 2001. They initially produced a great deal of Byzantine, Classical, and Late Iron Age materials. In 2003, the area yielded a cache of Late Iron Age pottery, perhaps best exemplified by a beautiful uniquely painted vessel (Gorny 2004). The following 2004 season produced what appeared to be part of the Middle Iron Age wall and one pier of a gate system. The 2005 excavations reached the Early Iron Age and perhaps the enigmatic "Dark Age" level that followed right on the heels of the Hittite Empire period. Materials consist of pottery with a second millennium feel and look but with a variety of designs that are closer to the Iron Age than anything else. The pottery was found in association with a fascinating structure of unknown function (Fig. 14). Besides the unique pottery are at least three round plaster surfaces purposely built in association with the building while a fourth plaster surface was found directly above the structure. Also of note is that the area produced a large quantity of spindle whorls, so one has to wonder if there is some connection to the weaving industry. Various pieces of evidence suggested that the plaster may have served as a work surface or part of a working area for textiles and/or wool processing as there was a very large number of perforated disks and broken perforated disks, which were almost certainly spindle weights/whorls, as well as a couple of loom weights. A little metal hook also came from that area, perhaps for the hanging of wool. It may be that this was an area for washing or laying out washed wool. Alternatively, it could have been an area for dyeing. Any one of those explanations would explain the "waterproofed" nature of the plastered circles. It also seems to have been burned intentionally before plastering, to harden the earth[14]

[13] The placement of the Temple of the Stormgod of Zippalanda is of some interest. We are looking for the Temple of the Stormgod of Zippalanda to be located on the eastern height of the mound as it is not only appropriate as the highest point on the site, but because the Hittite text describe the situation of the temple as above (šer) while the palace is said to below (kattan). While we have interpreted this to indicate the temple was located on the citadel and the palace on the terrace or at the base of the mound, it is entirely possible that the palace could be on the lowest part of the citadel. Because the surface of Çadır's citadel is somewhat higher on its eastern side than on the western side, the mound's topography might well fit the description in the texts with the temple approached on the higher eastern side through a series of terraces from the palace situated on the lower western side of the citadel. We can envision a situation where the citadel is enclosed with a temenos wall but which also has interior courts with the upper level of the citadel separated from the lower level by at least two courtyards. This arrangement is not unlike the situation found on the citadel of Büyükkale in Hattuša where the upper part of the fortress is divided into three sections by intervening courtyards (Neve 1982). In fact, the Zippalanda texts seem to indicate just such an arrangement where in the Fall and Spring festival the texts indicate that there is an inner court of some sort where the palwatalla man stands which is separated by steps from another, presumably higher court into which the Priest steps (Popko 167). If this is the case, we may expect to find several courtyard levels on top of Çadır's Hittite citadel.

[14] If we keep in mind the fact that the Hittites granted special status in laws 50 and 51 to the priests and weavers of both Arinna and Zippalanda that made them exempt from the luzzi requirement, we may find that we have a relic of that

The section of the Upper South Trench shows that the Hittite level lies immediately below this Early Iron Age structure in square 780.890. The Hittite remains are characterized by a layer of mixed debris scattered above the large mudbrick construction F 26 that was first revealed in 1998. Much of the debris is distributed as alternating levels of ash and bone in some of the more well-defined areas. Other extensive areas of mixed debris can be observed in the section littering the entire extent of F 26. That structure, which seems to be a mudbrick circuit wall, is *at least* 2 m thick (with the interior portion still buried beneath the balk) and is preserved to a height of about 1.7 m. Curiously, the circuit wall displayed no stone foundations of its own in this area and appears to be constructed on the remains of an earlier Chalcolithic/Early Bronze period mudbrick wall.

Wall F 26 had two later walls, F 24 and F 25, cut into it and running perpendicularly across it. Wall F 25 was cut into the western side of the trench, along with pit F 27. Wall F 25 also cut into pit F10, so in order to excavate pit F10, we had to remove wall F 25. This was not a clean removal as the wall ran diagonally into the trench's western balk where some of it still remains to be removed. Nevertheless, the procedure to remove wall F 25 showed that the wall, which was dated by pottery to the Hittite Empire period, was actually built over another wall (F 28) that was constructed of much larger stones and apparently cut into the mudbrick of wall F 26 even before wall F 25 was laid above it. This suggests that there are several phases of the Hittite Empire Period represented here, which is what one would expect for a site such as Zippalanda.

The above scenario seems to be confirmed by other facts. Wall F 24, on the eastern side of the trench, separated later fire installation F 5 from the rest of the area. The fire installation was dated by radiocarbon samples to ca. 1360 BC, which means that city wall F 26, just beneath it, must be earlier, *at least* 1400 BC., and based on the fact that a lower wall (F 28) underlies wall F 25, we can assume that wall F 26 is probably even earlier, perhaps in the 15th century, as we suggested above. Neither Wall F 24 nor F 25 (nor the larger wall beneath F 24) appears to be connected to an exterior crosswall. This wall presumably crashed down the slope as a result of erosional activity over the centuries and many of the Hittite artifacts found in the wash of the slope may have come from the collapse of that structure (for example, see Gorny *et al.* 2002, pp 118-120).[15]

In addition to the walls noted above, various pits had been cut into the mudbrick matrix of F 26 and these provided further evidence of the wall's date (Gorny *et al.* 2002: 118-19). The largest of these pits, pit F 10, contained numerous soil lenses and yielded a great deal of Hittite Empire period pottery in 2000, including several miniature Hittite votive plates (Gorny *et al.* 2002:119, Fig. 10). Pit F 10 was also stratigraphically below

situation still being manifested in the remains of the "Dark Age" settlement where the weaver's craft was still being practiced in keeping with the tradition of those laws.

[15] Catherine Kuzucuoğlu has speculated that one or more discharges of the Eğri Su may have hit the mound at various times in its existence and washed away portions of the mound, creating a small delta on the opposite side of the watercourse (personal communication). Perhaps this explains how the exterior crosswalls connecting walls F24 and F25 disappeared.

Wall F 28 (above) which adds yet another phase of activity to the Empire period history of the mound. Similarly, pit F 27, just north of pit F 10, also held only Hittite Empire period pottery. As with the walls (above), the pits also suggest that wall F 26 was built prior to the main stage of the Empire period, and probably in the Old Hittite period. Judging from what we have now observed in our investigations across the mound, wall F 26 seems to be contemporary with wall F 68 in square 800.910 of the Eastern Trench. This wall is almost certainly Old Hittite, probably datable to the 15th century, though its precise date will have to be substantiated by further excavation. A similar mudbrick construction, which may be contemporary with both F 26 (Upper South Trench) and F 66 (Eastern Trench), seems to be appearing under the monumental gate that dominated Çadır's northern slope (below).

VII. The North Slope (Area 6)

The decision to open preliminary excavations on the north slope in 2002 was due, in part, to robber trenches that had previously exposed two piles of large stones that apparently had been used as the foundations of a wall located three-quarters of the way up the north face of the mound and situated roughly in the middle of the north slope (Gorny 2004). The rock "construction" in square 850.800 appeared to be restricted to one area of the slope and did not continue around the mound. The stones seemed to be organized into two stacks of large rocks that were stepped up the slope on either side of an open space. With the discovery of second millennium pottery in the robber's spoil heap, we postulated that this might be two sides of a monumental gateway from the second millennium, so in order to investigate this structure, we opened a small east-west trench running between the two robber trenches and found that, as we had surmised, the wall did not continue across the span, but seemed to have a small, rather than large, entry way situated between the two stone constructions (F1 and F2). Pottery from above the gateway was a combination of Phrygian and Late Iron Age wares, including several pieces of what we take to be white painted Achaemenid pottery, along with an admixture of Hittite wares.

Initial excavations in 2002 confirmed that the stone construction on Çadır Höyük's northern slope was, indeed, an anomaly for the site. The opening in the gateway has not been completely excavated, but is postulated to be approximately 5 m wide. At the base of the stones is an abundance of yellow mudbrick, so we may have a parallel to the situation on the south slope where the Hittite city wall is built on an earlier mudbrick predecessor. If the mudbrick is datable to the 15th century as we theorized above, the gate would probably have been build in the fourteenth century or later. The style of construction recalls the platform built for Temple I at Boğazköy and suggested a Hittite origin for the construction. Excavation later confirmed this initial intuition as Hittite pottery attests to its second millennium construction.[16] The structure's orientation is

[16]Unfortunately, vandals pushed many of the rocks from the gate foundation down the hill during the last several years. Others have probably been taken over the centuries and used in the construction of other building in the region's various

aligned with the terrace and faces the height known as either Yazılıtaş Keh or Maltepe which also links the gate with the second millennium settlement now known to have existed on the terrace (above).

By 2005 we could tell that the gate continued to exist in some form for several centuries after the fall of the Hittites. During the (Early?) Iron Age, a small stone retaining wall was built on the east side of the gate entry to serve as the interior facing of a narrowed entry. The gateway was further narrowed on the west side by a wall of mud bricks and its interior passage was paved with several rows of small stones that created a 1 m wide path which can still be observed leading into the mound (Fig. 15).

An abbreviated 2 x 6 m sounding was undertaken in 2004 in order to further test the date of the structure. Two rooms were identified directly below the large rocks that had tumbled from the larger structure. These may have been guard rooms protecting the exterior part of the gate. Inside the higher of the two rooms were found materials from the late Hittite Empire period. Small stones just west of it may be part of a cobbled *glacis*. The excavated rooms are clearly Hittite in date, but how they were actually connected to the rest of the gate structure (which sits just slightly above them) remained unclear. Hittite pottery found near the base of the large stone structure suggests that the Hittites were involved with the structure's overall construction, which correlates with the materials found in the rooms.

Time, however, precluded a major effort in this area until 2005 when we were able to mount a larger investigation of the gate. Those excavations proved to be very interesting. As we opened more of the gate area it became clear that the original entryway was approximately 5 m in width. Above the Early Iron narrowing we uncovered a later (Late?) Iron wall that blocked off the entire span of the original gate entrance (Fig. 15). The western pier of the original gate is still unexcavated but where the eastern portion is cleared, one can see how the end of the (Late?) Iron Age wall met the interior portion of the gate. The sides of the gate have tumbled down, perhaps in an earthquake or by hostile activity, but the foundations of the later wall that closed off the gate remains intact. Ceramic evidence suggests that this closure dates to the Late Iron Age while the earlier narrowing noted above must be of the Middle or Early Iron Age. The three levels of the gate passage are clearly seen in photos of the gate. Pottery from the gate and surrounding area, such as this neck from a large flask (Fig. 16), indicate that the original gate itself is second millennium in date. Things should get even more interesting. Since the structure is high on the slope, it must have been approached by steps or a ramp of some sort. A wide earthen ramp on the north side of the mound may have something to do with such an approach though it may be a *glacis* of the sort known from Boğazköy. It remains to more fully articulate its construction and function, both of which are goals for the 2006 season.

villages. In spite of this we continued on with the work in square 850.880 by opening up a 10 X 2 meter trench in 2004 that was intended to study the gate's history.

VII. ÇALTEPE (AREA 7)

During the summer of 2005 we undertook an informal investigation of the mountain called Çaltepe which lies across the valley from Çadır. No excavations have taken place on Çaltepe, but various observations made during those visits have led to the theory that Çaltepe could be Mt. Daha, the site of important festivities for the Stormgod of Zippalanda's cult. We know quite a bit about Zippalanda and Daha by virtue of the numerous texts found in Hattuša which describe the town and its cult. What we found on Çaltepe perfectly fits the requirements for what we know about the Hittite holy mountain and is a crucial link in our tentative identification of the mound and mountain with Zippalanda and Daha.

To begin with, we knew that Mt. Daha was very close to Zippalanda and Çaltepe is situated less than a kilometer away from Çadır Höyük. One can clearly see Çadır Höyük from Çaltepe and the height of Çaltepe is plainly visible from Çadır Höyük. This is significant in that the texts make it clear that the Hittite king is able to look down on Zippalanda from the spot of his activity as he bows to the city. It is also clear that the people in Zippalanda were able to see the activities on the mountain. In this respect, the proximity of Çaltepe to Çadır Höyük makes perfect sense and nicely fits the requirements of the texts. Taken together, these facts make Çaltepe an obvious candidate for Mt. Daha.

Secondly, KUB XLI 29 indicates that there is a building on Mt. Daha which served as a temple or center of worship for the Stormgod of Zippalanda. Texts also mention a gated-courtyard or what the Hittites called a *hilammar* building existing very close to the temple. Not coincidentally, the two most striking architectural features to be found on Çaltepe (in fact the only ones that I know of) are a large 40 x 80 m walled-in space just below the summit and a gated-courtyard compound (Hitt. *hilammar)* just east of the large building. The first of the constructions is located slightly below the summit of the mountain and is oriented roughly east-west (Fig. 17).[17] The construction is characterized by a large open area within its walls and a series of what appear to be storerooms that line the area's western extremity. The lower western portion of the enclosure rises steeply after about 20 meters and settles into a rather level area for the last 60 meters. I think that the former area must be a forecourt while the raised eastern area covers the remains of a temple to the Stormgod of Zippalanda. No matter how the area is arranged, however, there is plenty of room for a temple here. Temple 7 in Boğazköy's Upper City, for instance, is about 30 x 40 meters and would fit nicely within these temenos walls (see Parzinger and Sanz 1992, Plate 79). The temple would have been located very near the peak of the mountain and from this vantage point the cult personnel

[17] Once the king reached the main temple area, there is a nicely carved set of steps east of the temple that are oriented towards the summit where I presume the original alter to the Stormgod of Zippalanda once stood. The area is now covered by a later Iron Age tumulus. In the texts, the "the hamina man" apparently goes up to the top of the mountain, probably with the king. Then, the "Man of the Stormgod" makes a pronouncement for Stormgod to awaken and take note of the king who is noted as being "below", presumably at the temple, and subsequently opens the gate of the temple (Popko 217). Some time later the king emerges from the temple with the other dignitaries.

could certainly see the city, and the people in Zippalanda could easily see the festivities on the mountain (Fig. 18, also cf. Popko p. 217).

The actual plan of the Çaltepe building awaits excavation but seems to resemble a slightly elongated version of Temple 2 in Hattuša's Upper City (Parzinger and Sanz 1992, Plate 79) where the temple is placed in a *temenos* area enclosed by a privacy wall. The area of Temple 2 is approximately 50 X 40 m so that building could fit into the Çaltepe area with room to spare. According to the plan for temple 2 (and the Çaltepe building), the cult participants would enter the door of the building and find a series of storerooms on the right, just as on Çaltepe. The storerooms would continue across the back portion of the structure, thereby enclosing a court (as proposed above) and leading to a cella situated on the eastern side of the cult area. A portico may have fronted the storerooms as in the case of Temple 2, and perhaps, even the antechambers leading to the cella.

The possible *hilammar* is located on the eastern side of Çaltepe-Daha.[18] It consists of a multi-roomed area having a large walled courtyard with two gates. The rocky space between the gates was once a surfaced courtyard where the king stepped out of his coach and into a chariot he would use to depart from the mountain. A separate room along the side of the courtyard may have been a stable or a place to temporarily keep the king's horses and travel accouterments. It is probably not a coincidence that the two gates of the courtyard are oriented towards Alişar and direct traffic south from the mountain towards Alişar (Ankuwa) and the main road south. A road descends the gentle slope behind the mountain that leads through the present day village of Karahacılı. From there the road would have split with one fork continuing towards Alişar while the other splits off to Salur Höyük (Katapa) on the north slope of Çomak Dağ. Both settlements would have been reached in a relatively short period of time by the king's chariot as described in the Hittite texts. The Stormgod of Zippalanda's image was sent back to its primary temple in Zippalanda after the king's departure and a herald is sent to either Ankuwa or Katapa to inform the king of its safe return home. The king returns to the Capitol after completing his functions in those two towns via a more northerly route.

VIII. Analyses, Final Observations, and Conclusions

Excavations at Çadır Höyük since 1994 suggest that the site was the center of important religious activities over the entire span of its existence. Evidence has been uncovered indicating that from the Chalcolithic through the Byzantine periods, religion played a key role in the settlement's historical development. The same was especially true during the second millennium when we believe the site functioned as a major exponent of the Hittite cult, maintaining a continuity of function that existed there for seven millennia.

[18] The *hilammar* was originally noted in our 1998 survey as site 98-6 (Gorny *et al.* 1999: 11). It was not, however, associated with Çadır Höyük at time because the connection with Zippalanda had not yet been proposed. Further exploration revealed the *temenos* structure on Çaltepe's northern slope and allowed the previously discovered structure to make sense as the *hilammar*.

The full extent of the second millennium settlement is only beginning to become apparent. Ample attestation of the period comes from remains found in multiple areas. It would be fair to say that Hittite materials are the most abundant materials found on the site and those remains demonstrate that the Hittite settlement was much more extensive than we suspected on our arrival at the site in 1994. In the east trench (Area 1), for instance, we now have a sequence of occupation spanning the EB III (ca. 2500 BC) period all the way through the final days of the Hittite Empire period (ca. 1175 BC). This second millennium sequence is substantial and spans most of the 40 m step-trench we cut into the mound's eastern slope. In addition, there is a monumental gate from the late second millennium situated on the northern slope, while impressive Hittite structures are found on the lower south slope and additional second millennium remains are known from the terrace. The prominence of the settlement is underscored by the presence of the presumed Hittite temple and *hilammar* on nearby Çaltepe

Second millennium pottery is abundant and greatly informs us about the history of the mound throughout the Hittite era. Included in the Hittite Empire ceramic repertoire are pieces of thin porcelain ware vessels, Hittite painted wares, and the ubiquitous mass produced plain wares. In addition, we have observed the notable red burnished ware specific to cultic vessels found in Empire period deposits at Boğazköy-Hattuša. From the style and abundance of the Empire period ceramics, it has become clear that Hittite Empire period occupation existed much higher up on the mound than earlier guessed and was of a greater significance than first assumed.

Significant Old Hittite levels have also been identified below the Empire period remains with pottery characterized by plain wares, goldglimmer ware, red striped or banded ware, and the beautiful red polished wares associated with the earliest Old Hittite period at places such as Alişar, Ferzant, and Kültepe. Overall, the second millennium pottery speaks to the long history of Hittite occupation at Çadır and demonstrates continuity with both the preceding Old Assyrian Colony Age and the subsequent Early Iron Age period.

Çadır was clearly a significant Hittite settlement throughout the entire second millennium, a situation that we are utilizing to better understand settlement at nearby Alişar and one that could ultimately transform our understanding of that site, along with the entire geography of central Anatolia in the second millennium. Of particular note for the Hittite period is the cultic character of Çadır. Not only have we found the small votive bowls so common in Boğazköy cultic contexts, but we've also discovered sherds from red burnished ware cult vessels, along with small idols and figurines. Of added interest is the presence of several clay wheels, presumably from wagon models intended to carry images of the gods, in this case perhaps the Stormgod, thus carrying on a tradition that must have begun centuries before.[19]

[19] R.L. Gorny, An Unpublished Relief Sherd from Alishar Höyük. Pp. 175-188 in *Studies in the Archaeology of Israel and Neighboring Lands in Memory of Douglas L. Esse*. Chicago: Oriental Institute of the University of Chicago (SAOC 59).

The emergence of Çadır Höyük as an important Hittite site calls for a reexamination of the current ideas concerning history and geography in the Kanak Su Basin. Several lines of thought have been advanced in support of the idea that Çadır Höyük is the site of ancient Zippalanda and a variety of additional arguments that could be brought to bear in support of the proposed identification. In short, while the location, pottery, and topography all seem to fit what is know about Zippalanda, the most important element in the equation may be the architectural remains found across the valley on the height of Çaltepe which we assume to be the Hittite holy Mount Daha. These topics will be the subject of future articles.

In the meantime, of course, we continue to investigate Çadır as a whole, hopeful of bringing more overall meaning to the mound's constituent parts. While events related to the rise and fall of the Hittite state are vitally important, I believe they are even more significant as part of a historical process that extended from the Chalcolithic period through the Byzantine period, and which also brought the second millennium Hittite settlement to a prominence that extended beyond the local Kanak Su valley. The association of Çadır Höyük with Zippalanda has the potential to provide a new and useful paradigm for understanding the problematic history and geography of central Anatolia. In this light, no matter how correct or how interesting such an identification may be, we are reminded that it only represents one piece in the more complex puzzle of how cultural entities arose in central Anatolia, how they maintained themselves, and ultimately, how and why they changed. Understanding the high degree of interconnectedness between the evidence from all these levels is critical in coming to a fuller understanding of, not only Çadır Höyük-Zippalanda's role in Hittite Anatolia, but the place Çadır Höyük occupied in the entirety of central Anatolian history.

References

Branting, S., 1996 – The Alişar Regional Survey 1993-1994: A Preliminary Report. *Anatolica* 22: 145-158.

Genz, H., 2001 – Iron Age Pottery from Çadır-Höyük. *Anatolica* 27: 109-136.

Gorny, R.L., 1989 – Environment, Archaeology, and History in Hittite Anatolia. *Biblical Archaeologist* 52: 78-96.

Gorny, R.L., 1990 – Alişar Höyük in the Second Millennium B.C. Ph.D. dissertation, University of Chicago.

Gorny, R.L., 1994 – The 1993 Season at Alişar Höyük in Central Turkey, *Anatolica* 20, pp. 191-202.

Gorny, R.L., 1995a – Alişar Höyük in the Late Second Millennium B.C. Pp. 159-171 in: Proceedings of the Second Congresso Internazionale Di Hittitologia. Pavia, Italy (June 28-July 2, 1993). Pavia: Gianni Iuculano.

Gorny, R.L., 1995b – Imperial Integration and Anti-Imperial Resistance in Hittite Anatolia: The View from Alişar Höyük. Pp. 65-89 in: The Archaeology of Empire in Ancient Anatolia: Papers from the American Schools of Oriental Research Annual Meeting, Chicago, 1994. *BASOR* 299/300, Ronald L. Gorny and Sharon Steadman (eds.).

Gorny, R.L. *et al.*, 1995c – The Alişar Regional Project: 1994 Season. *Anatolica* 21: 68-100 (with Greg McMahon, Sam Paley, and Lisa Kealhofer).

Gorny, R.L., 1997 – Zippalanda and Ankuwa: The Geography of Central Anatolia in the Second Millennium B.C. A review article of M. Popko, Zippalanda: Ein Kultzentrum im hethitischen Kleinasien. Heidelberg: Universitätsverlag C. Winter. *Journal of the American Oriental Society* 117: 549-557).

Gorny, R.L. *et al.*, 1999 – The 1998 Season at Çadır Höyük in Central Turkey. *Anatolica* 25: 149-183 (with Gregory McMahon, Samuel Paley, Sharon Steadman, and Bruce Verhaaren).

Gorny, R.L. *et al.*, 2000 – The 1999 Season at Çadır Höyük in Central Turkey. *Anatolica* 26:153-171 (with Gregory McMahon, Samuel Paley, and Sharon Steadman).

Gorny, R.L., 2001 – An Unpublished Relief Sherd from Alişar Höyük. Pp. 175-188 in: Studies in the Archaeology of Israel and Neighboring Lands in Memory of Douglas L. Esse. Chicago: Oriental Institute of the University of Chicago (SAOC 59).

Gorny, R.L. *et al.*, 2002 – The 2000 and 2001 Seasons at Çadır Höyük in Central Turkey. *Anatolica* 28:109-136 (with Gregory McMahon, Samuel Paley, and Sharon Steadman).

Gorny, R.L., 2004 – *Alişar* Regional Project: Excavations at Çadır Höyük. Pp. 13-24 in *The Oriental Institute 2003-2004 Annual Report*. Chicago: University of Chicago.

Gorny, R.L., 2005 – Çadır Höyük: Zippalanda Reborn? *The Oriental Institute News and Notes* 184, Winter 2005: 9-12.

Gorny, R.L., 2006 – Çadır Höyük and Çaltepe: Are they the Hittite City of Zippalanda and the Holy Mt. Daha?. To appear in *The Oriental Institute News and Notes* 188, Winter 2006.

McMahon, Gregory, 1991 – The Hittite State Cult of the Tutelary Deities. Chicago: University of Chicago Press.

Newton, M. and P. Kuniholm, 2004 – A Dendrochronological Framework for the Assyrian Colony Period in Asia Minor. Pp. 165-176 in TUBA-AR VII.

Neve, P., 1982 – Büyükkale: Die Bauwerke. Berlin: Gebr. Mann Verlag.

Popko, M., 1994 – Zippalanda: Ein Kultzentrum im hethitischen Kleinasien. Heidelberg: Universitätsverlag C. Winter. *Journal of the American Oriental Society* 117: 549-557).

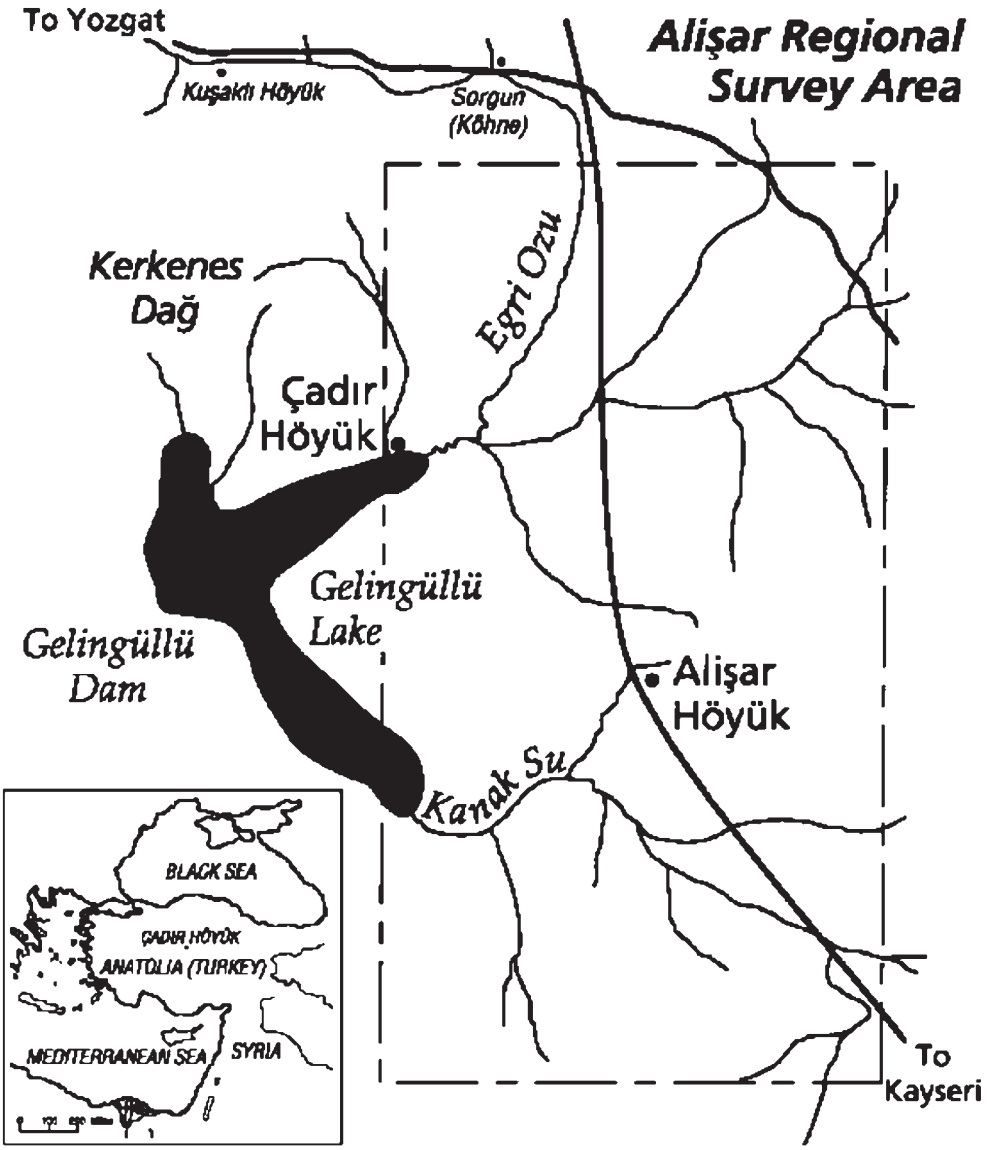

Fig. 1. The Kanak Su Basin showing Alişar and Çadır Höyüks.

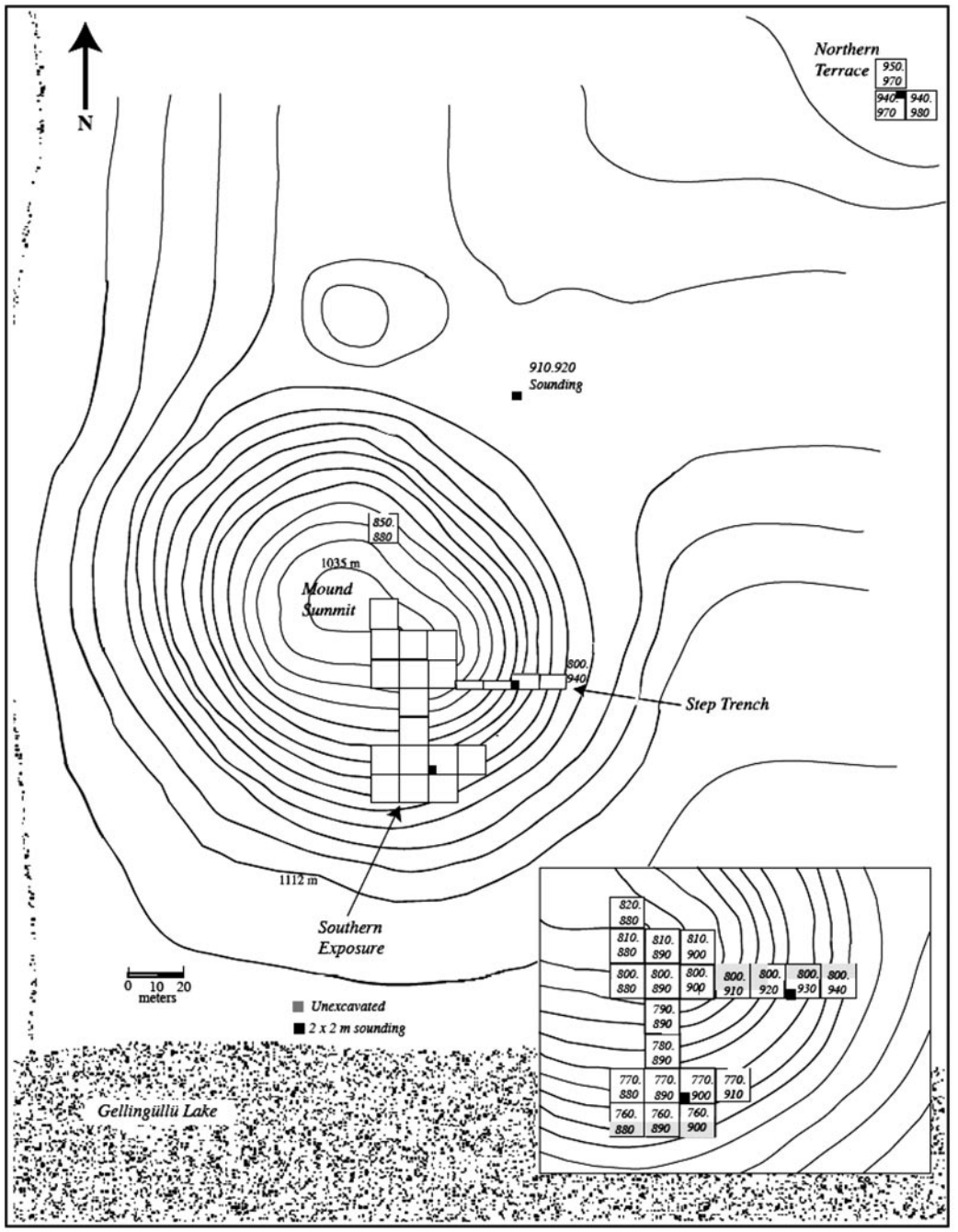

Fig. 2. Excavation areas on Çadır Höyük.

Fig. 3. Çadır Höyük (Zippalanda?) on the right with Çaltepe (Mt. Daha?) to the left.

Fig. 4. Front face (F 6) of (Karum Ib) period casemate wall with ash-filled interior.

Fig. 5. Walls F 7 (top) and wall F 6 (right) showing plaster surface and EB III Wall F 43 (left).

Fig. 6. Sounding behind wall F 20 in Trench 800.930 showing Karum II structure.

Fig 7. Interior rooms and pit F 41 from Early Old Hittite Period in trench 800.920

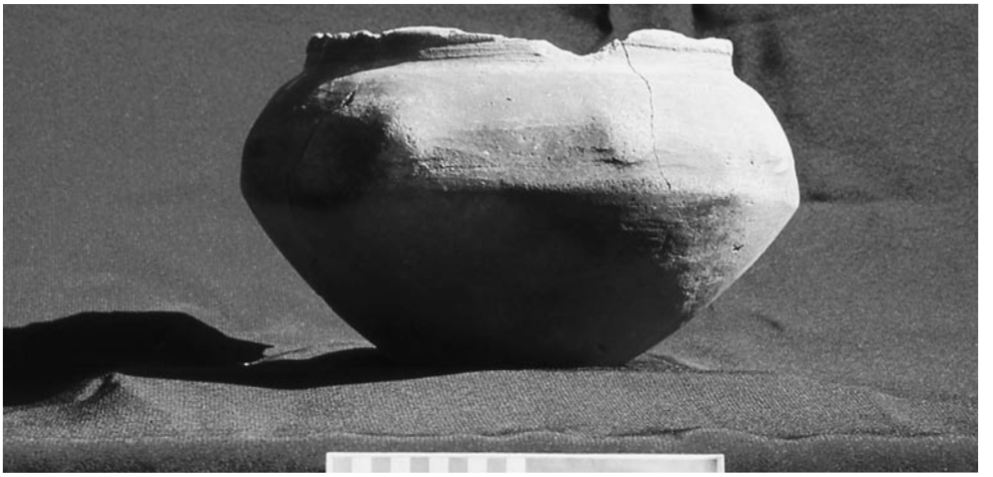

Fig. 8. Knobbed pot from Pit F 41 (Early Old Hittite) in trench 800.920

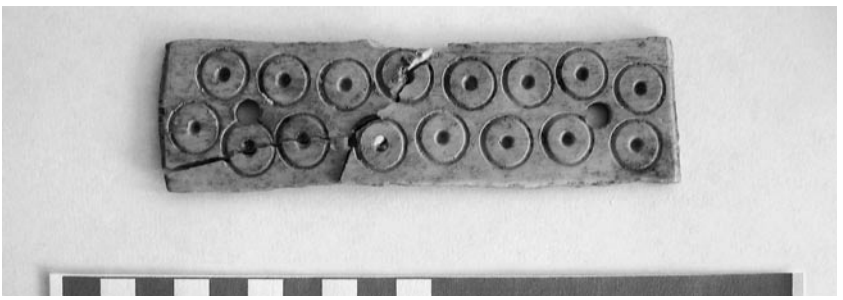

Fig. 9. Decorated bone inlay from pit F 41 in trench 800.920.

Fig. 10. Early Old Hittite Period seal from trench 800.920.

Fig. 11. Bull (?) Figurine from floor of building in Trench 800.920

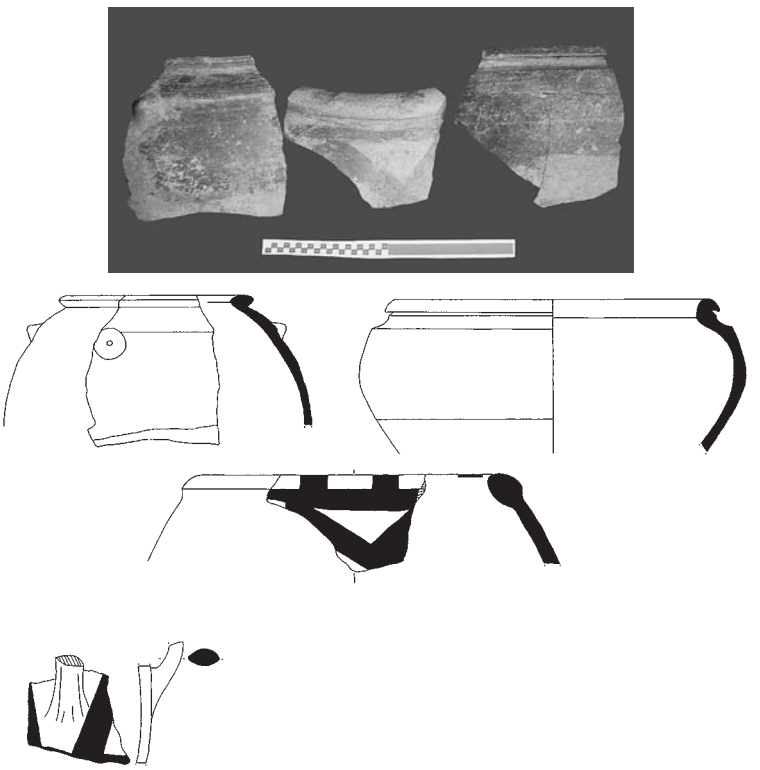

Fig. 12. Early Old Hittite Period Pottery from step/bench in Trench 800.920.

Fig. 13. Early Old Hittite Red Polished Pitcher from Trench 800.920

Fig. 14. Early Iron Age or "Dark Age" installation in trench 790.890.

Fig. 15. Late Iron Age casemate wall closing the second millennium gate (upper right).

Fig. 16. Neck of large Hittite period flask from second millennium gate area.

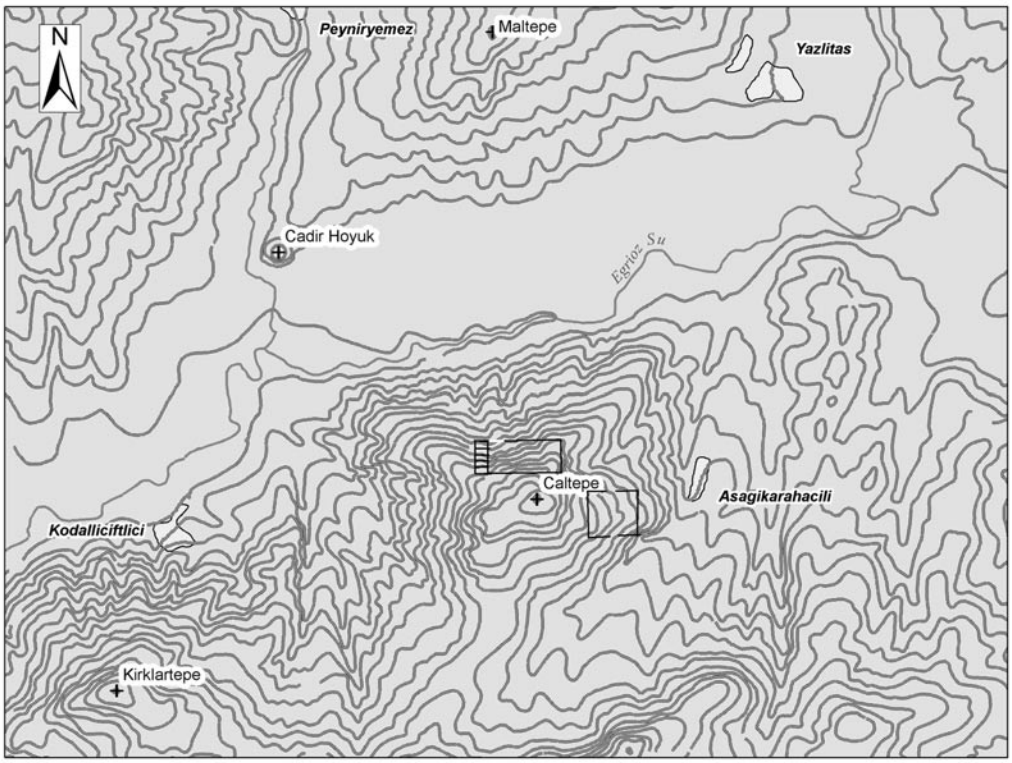

Fig. 17. Topographic map of Çaltepe showing approximate location of "temple and hilammar" (Note: buildings not drawn to scale).

Fig. 18. Storerooms (front) and wall line of the "Temple Area" on Çaltepe – Mt. Daha (?).

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LOCAL STEPS TOWARDS URBANISM IN EASTERN AND SOUTH-EASTERN ANATOLIA (3900-2600 BC)

Alev Erarslan

INTRODUCTION

The beginning of the urbanisation process of the eastern and southeastern Anatolia regions consists of two phases; the Proto-Urban Period (5000-2600 BC) and the Early Urban Period (2600-1900 BC). The Proto-Urban Period is a formative time on the road towards urbanism and state societies in eastern and southeastern Anatolia. This period has been characterised by important social, economical and political organisations that are the first signs of nascent changes towards urbanism beyond the level of simple farming villages.

This paper presents an overview in order to understand the local aspects of development towards initial stages of urbanism in eastern and southeastern Anatolia in the Proto-Urban Period.

THE BIRTH OF LOCAL URBANISTIC DYNAMICS

Starting in the Proto-Urban Period, characteristics unique to urban societies (also called complex societies) begin to appear in both regions. There are local societies without any sign of Mesopotamian influence and representing only local developments in these regions within the second phase of this period (the first phase of which is the Ubaid Period), dated to the first half of the fourth millennium (3900-3500 BC) and called the Local Late Chalcolithic Period or Pre-Contact Period in northern Mesopotamia and Anatolia.

In this phase, we have evidence from the settlements of Arslantepe VII, Norşuntepe, Tepecik, Korucutepe and Fatmalı-Kalecik in eastern Anatolia and from Hacınebi A-BI and Kenan Tepe in southeastern Anatolia (Fig. 1). The existence of public structures implying central authority has been found at Arslantepe VII, Norşuntepe and Hacınebi A-BI. In Arslantepe VII in the Malatya Plain a huge monumental public ceremonial building (Building XXIX) covering an area 390 m^2 was unearthed, standing on a raised platform and consisting of a tripartite plan[1] (Fig. 2). The hundreds of mass-produced bowls for food distribution and clay sealings uncovered in the building suggest that the main activity carried out here was redistribution in a ritualised or ceremonial

[1] Frangipane 2002a: 124; 2003: 155.

manner involving corvée labour and administrative control over the accumulation of goods[2]. Therefore a centralised system based on redistribution and labour control appeared in a local context apart from the Mesopotamian culture in this period[3].

Another site, Norşuntepe, covering a large area some 900x700 m, must have been the central establishment in the Altınova plain of Elazığ[4]. In a deep sondage in the eighth phase (levels XXXIV-XXXIII) of the site remains were found of very substantial walls with niches, that suggest monumental structures, possibly for administrative use[5]. Because the area exposed is so limited, however, it is difficult to say anything about the plan and funtions of these structures or to draw any definite conclusions.

Hacınebi A-BI in Urfa-Birecik were enclosed by quite impressive fortification walls three meters in width, niched and buttressed, and it is thought that there may have been some public structures or elite residences upon a monumental stone terrace and platform complex in the northeast corner of the settlement[6].

The settlements of this period reveal craft specialisation and technological developments in metallurgy, ceramics and lithic technology. Metal working is the most important specialisation activity in the settlements. From levels XXXVI-XXXV at Norşuntepe many finds related to metallurgical activity were found, such as large amounts of copper ores, raw copper and slags, as well as crucibles, moulds, smelting pits, furnaces and ladles for outpouring molten metal inside houses, courtyards and streets, suggesting intense metallurgical activity performed by local smiths at the site[7]. Hauptmann asserts that this activity was undoubtedly centrally managed[8]. At Tepecik and Tülintepe slags, smelting pits and furnaces were found, indicating the melting of ores locally[9]. At Korucutepe, another site of Altınova, burial gifts of copper, silver and gold were recovered in two tombs at a cemetery near the settlement, and large copper ingots were found within the settlement itself, which confirm a high development of craftsmanship in metalworking[10]. In a small hamlet of Fatmalı-Kalecik, we have evidence of silver, lead and copper production to a lesser extent, litharge and lead-silver and copper slags[11]. Specialisation in metalworking also appeared in the northeastern quarter of Arslantepe VII; here pins, small chisels, awls and smelting pits were uncovered[12]. Hacınebi A-BI in southeastern Anatolia is described by Stein as a small chiefdom overseeing and controlling access and production of copper[13]. Evidence of highly evolved

[2] Frangipane 2001a: 3; 2001: 329; 2002a: 124.
[3] Frangipane 2001: 329.
[4] Hauptmann 1979: 56.
[5] Frangipane 2002: 191; Harmankaya *et al.*, 1998: Norşuntepe.
[6] Stein 1999: 124-125; 2002: 150.
[7] Hauptmann 1982: 60-61; 1997: 1354; 2003: 22; Yakar 1984: 66; 2002: 18; Yener 2000: 41; Özbal and Turan 2001: 60.
[8] Hauptmann 1979: 57.
[9] Yakar 1984: 67; 1985: 385; 2002: 18; Yener 2000: 41; Özbal and Turan 2001: 60.
[10] Van Loon 1978: 61-63; 1981: 3; Yakar 2002: 16-17.
[11] Hess *et al.*, 1998: 57-59, 65; Hauptmann *et al.*, 2002: 58.
[12] Frangipane 1993a: 147; 2002: 196.
[13] Stein 2002: 151.

copper production was found at the site such as smelting pits, casting moulds, crucible fragments, a multi-furnace metal workshop, slags and a tuyere or blowpipe used to heat the ore for smelting, as well as finished products like copper chisels and pins[14].

These metallurgical activities carried out at sites show both the existence of highly skilled local metalsmiths and high technological advancement. Smelting of both oxide copper ores and polymetallic copper ores, which involve a multi-stage smelting operation, melting and refining, was widespread in this period[15]. At Norşuntepe, oxidized copper ores were smelted, which was the first such experiment in using a high amount of antimony and arsenic for an improved copper product[16]. At Tülintepe, the low iron content in the slag fragments indicates the smelting of oxidised copper ores[17]. At Tepecik, a slag fragment with low iron content also points to the use of oxidised copper ores[18]. Copper ore samples imply that at Arslantepe VII, copper was polymetallic in nature, containing arsenic, antimony, lead and nickel[19]. Polymetallic ore with high nickel content was also discovered at Hacınebi[20].

During this period, specialisation can also be followed in pottery production. In the early phases of Arslantepe VII, it is seen that mass-produced bowls include flint-scraped bowls and conical bowls, frequently bearing potter's marks, were produced on a tournette or slow wheel whereas string-cut bowls (made again with potter's marks) were made in more standardised sizes on a fast wheel towards the end of this period[21]. In the latest level of the period, wheel-made small beakers that are standardised in shape and size appeared[22]. At Hacınebi A-BI, two types of ceramic manufacture were produced by both households and specialists[23]. Chaff-tempered storage vessels, casseroles and bowls were hand-made by households for their own use[24], while fine wares, produced in small amounts, include small carinated serving bowls and jars which were wheel-made by specialists for local exchange and consumption, showing a high degree of standardisation[25]. Kenan Tepe, located on the north bank of the Tigris 15 km east of Bismil, was a large town with six hectares in this period, reveals a pottery production that reflects a local flavour[26].

Other craft specialisations seen in this period are flint and obsidian tools at Norşuntepe, obsidian tools at Arslantepe VII and stone tool manufacture at Hacınebi A-

[14] Stein *et al.*, 1998: 189-190; 1999: 130, 137; 2002: 150; Özbal *et al.*, 2000: 60.
[15] Özbal 1997: 141.
[16] Yakar 1984: 66; 1985: 385; 2002: 19.
[17] Yakar 2002: 18.
[18] Yakar, 2002: 18.
[19] Frangipane 2002: 196; Yakar 2002: 19.
[20] Özbal 1997: 141.
[21] Frangipane 1993a: 147; 2000: 442-443; 2002a: 125; Trufelli 1994: 245.
[22] Frangipane 1993a: 147; 2000: 443; 2002a: 125.
[23] Stein 1999: 134.
[24] Stein 1999: 134; 2002: 150.
[25] Stein 1999: 134; 2002: 150.
[26] Parker *et al.*, 2002: 7; 2003: 132.

BI. At Norşuntepe levels XXXVI-XXXV, flint and obsidian tools were witnessed in the workshops where an astonishing number of arrowheads made of obsidian and knives from obsidian and flint were under production[27]. At Arslantepe VII, several dozen obsidian arrowheads, together with a large amount of ochre, were found in a complex of three long adjacent rooms behind the ceremonial building[28]. Chipped stone tools were manufactured by both households and small-scale specialists in Hacınebi A-BI[29]. Flake tools were manufactured by households while Canaanite and simple blades were produced by specialists on a small scale for local exchange and consumption[30].

Evidence of a long distance trade and exchange system was also found in this period. The intensity of metalworking in the settlements clearly indicates that these activities were carried out for trade and export beyond the individual needs[31]. Stamp seals were found in levels XXXVI-XXXV at Norşuntepe, i.e. the levels where metallurgical activities were most concentrated. Metallurgical and administrative artifacts were discovered in the warehouse of Hacınebi A-BI, in particular the clay sealings in one of the three long parallel rooms used for storage of handicraft products of Arslantepe VII[32]. All of this suggests that these products were aimed for trade and exchange.

These polities had interregional exchange networks for procuring raw materials. The metalsmiths of the Altınova and Arslantepe VII inhabitants could have supplied their needs of copper from several different kinds of sources, even from distant ones instead of the Keban and Ergani copper mines that were very near to these sites[33]. At Hacınebi A-BI, metallurgical data also confirms that copper and silver were obtained by long-distance exchange. Evidence of long-distance ore trade can be seen in the copper obtained from the Ergani copper deposits and the silver, but it is not known whether it was produced on site or imported as a finished product, originating from the Amanos Mountain Range[34]. Further indication of such metal commerce includes both raw material and finished products, Anatolian in origin, that were found in graves at Tell Qalinj Agha and Tepe Gawra as funerary gifts of gold, silver, copper and of obsidian from Anatolia[35]. Other evidence of foreign trade includes obsidian from the area of Bingöl Mountain and flint from the southern Taurus range found at Norşuntepe, as well as marine shells from the Mediterranean and both bowls and necklaces of chlorite from the region of Diyarbakır, all found in the Hacınebi A-BI settlement[36].

[27] Hauptmann 1976: 55; 2003: 22.
[28] Frangipane 2001: 329; 2002a: 125; 2003: 156.
[29] Stein 1999: 134.
[30] Stein 1999: 136.
[31] Hauptmann 1976: 56-57; Yakar 1985: 385.
[32] Hauptmann 1997: 1354; Stein 1999: 122; 2002: 150; Frangipane 2001: 329; 2002a: 125; 2003: 156.
[33] Yakar 1984: 67; 1985: 385; 2002: 18; Frangipane 2002: 196.
[34] Stein 1999: 130; 2002: 150.
[35] Lupton, 1996: 35-36; Abu Al-Soof 1969: 5; Abu Al-Soof and Es-Siwwani 1967: 72; Rothman 2001: 379; 2002: 91, 149.
[36] Hauptmann 2003: 22; Stein 1999: 128-129; 2002: 150.

The presence of socio-economic differentiation demonstrated in this period is another important urban characteristic, reflected in the domestic architecture, burial gifts, seals and labour organisation. From level XVIII at Norşuntepe a large rectangular building with one-room was found and one of its walls was decorated with niches and a painting of a stylized representation of a deer[37]. This building may have belonged to a person or family of high status[38]. At Arslantepe VII there was a huge monumental structure of sun-dried mudbrick, its walls reaching 1.20 m thick except for an ordinary residential area in the north-eastern part of the settlement[39]. The structure consists of four rooms side-by-side with almost every wall decorated with wall paintings on white plaster and with plastered mudbrick columns for decorative purposes that ran along the walls of each room[40]. This structure did not contain objects of cultic and administrative significance, and might well represent the residence of a privileged family[41].

Burials at settlements of this phase also highlight social and economic class distinction. Funerary gifts were found in two graves of sun-dried mudbrick at Korucutepe. Gifts included weapons and agate jewellery made of precious metals such as gold, silver and copper[42], indicating that these persons belonged to the upper class. A child's burial in the Hacınebi A-BI also emphasises class distinction. Whereas most children were simply interred in jars without any gifts beneath the floors of the dwellings, the jar in which this particular child was found contained some grave goods including prestige items – a miniature ceramic vessel, one copper ring and two silver earrings – that are obviously evidence for social stratification in the society[43]. Further evidence for the presence of high status persons in Hacınebi A-BI comes from seals, particularly their quality and designs[44]. The variation in the seal designs on seal impressions indicates the relative status of the seal users[45].

Social and economic inequality is also seen in labour organisation in this period. The mass-produced bowls in Arslantepe VII are related to the food distribution of an unpaid labour force of corvée labourers, persons working for high-ranking families or central institutions, and receiving mass-produced bowls such as the so-called Coba bowls in the Late Ubaid[46]. In addition, these bowls are the other indicator of the presence of an elite class, in other words administrators, who monopolised resources and redistributed food[47].

[37] Hauptman 1976: 54; 1997: 1354; 2003: 22.
[38] Lupton 1996: 36; Frangipane 1993a: 135; Yakar 1997: 367.
[39] Frangipane 1993a: 135, 139; 2002: 192-194; 2002a: 124.
[40] Frangipane 1993a: 139-141; 2002: 192-194; 2002a: 124.
[41] Frangipane 2002a: 124.
[42] Van Loon 1978: 61-63.
[43] Stein 1999: 125-126; 2002: 150.
[44] Stein 1999: 128.
[45] Stein 1999: 128; 2002: 150.
[46] Frangipane 2003: 156.
[47] Frangipane 2002a: 127.

INDIGENOUS URBANISTIC TENDENCIES IN THE PERIOD OF URUK EXPANSION

Within the second half of the fourth millennium, called the Late Uruk Period in the south, but often termed the Contact Period in the northern regions, both regions fell under the influence of southern Mesopotamia with the Uruk culture spreading into the neighbouring areas of Iran, northern Syria and Mesopotamia and Anatolia. This period saw establishing strategically large urban-sized enclaves at focal nodes of the lines of communication across the plains of northern Mesopotamia, much smaller stations along the principal routes from the alluvium to the enclaves, and small outposts deep in the surrounding highlands[48].

Enclaves, stations and outposts reflecting the typical Uruk settlement plan have been located in Anatolia, showing an organised trade network of Uruk merchants at sites such as Carchemish, Samsat, Şadi Tepe, Tiladir Tepe, Komeçli, Kum Ocağı, Hacınebi B2, Hassek Höyük and Tepecik[49]. There are, however, some local settlements that were influenced by the Uruk enclaves or Uruk elements that had penetrated to the local contexts, such as Arslantepe VIA and Kurban in this period[50]. In this period, the only local settlement that is not affected by Uruk elements, although it lived together with an Uruk colony, appears at Hacınebi B2.

Arslantepe VIA was a well-organised regional center or a local city-state controlling the surrounding population, affected somewhat by the Mesopotamian system through direct or indirect relations with Uruk groups, but based on the growth of local organisational structures by the local elites in the Late Chalcolithic[51]. This coexistence of local Late Chalcolithic and southern Mesopotamian artifacts at the site was also seen in the architecture, glyptics and ceramic production[52].

The huge public area at the site, covering at least 2600 m^2, comprised a variety of buildings with different public functions, both religious and administrative[53]. There are two temples in bipartite plan and a complex of store-rooms identified as a palace-like building because of its multi-functional character (Fig. 3). Their layout as well as their architectural features and the wall paintings in the palace passages carry entirely local characteristics, albeit reflecting a number of southern elements[54]. The socio-economic organisation consisted of economic centralisation, redistribution and widespread administrative control by these central institutions which controlled their own people, territories and labour, as well as accumulation of both agricultural surplus and raw materials. This was based on the Mesopotamian model rather than the local socio-

[48] Algaze 1989: 571; 1993: 24.

[49] Algaze 1989: 577; 1993: 29, 32-34, 50; 1999: 540; Stein 1999: 96, 100; Stein and Mısır 1994: 148; Frangipane 2003a: 26.

[50] Schwartz 1988: 11; Stein and Mısır 1994: 148.

[51] Frangipane 1996: 61-62; 1997: 45; 1998: 197.

[52] Frangipane 1998: 197; 2001: 332-333; 2002a: 128.

[53] Frangipane 1996: 62.

[54] Frangipane 1996: 62; 1998: 197; 2001: 332-333, 337; 2002a: 127; 2003: 154.

economic system before Uruk expansion[55]. The vast majority of stamp seals and the mass-produced bowls, without any evidence of bevelled-rim bowls, indicate local roots of centralisation here[56]. But it is more pronounced due to southern effects, which is unlike Arslantepe VII[57].

As far as craft products at the site were concerned, metalworking was conducted locally and carried strong local traditions, whereas pottery production was strongly influenced by Uruk culture[58]. The weapons, consisting of spearheads and swords, do imply a highly skilled craftmanship and technology in the metallurgy by local metal smiths. In ceramic production, a large proportion of Uruk wares represent local imitations with some local taste and traditional manufacturing techniques, while some pottery types were completely in Uruk type[59]. The glyptics mainly comprise of stamp seals that were of local production as well as a very small percentage of locally made copies of Uruk style cylinder seals and their iconography[60].

Another type of settlement that carried only local urbanistic traits is encountered at Hacınebi B2. In the south area of site a local occupation was found together with an Uruk enclave located in the north part of the site[61]. Here both societies were independent from each other socially, economically and politically, that is, neither of them dominated the other[62]. The local polity was contemporary with the Uruk colony at the site and had a high-degree of politic and economic complexity, as witnessed not only in the administrative system of both elaborate and simpler stamp seals as well as uncarved seal blanks, but also in the production of blades, bladelets, ceramics, metals and weaving[63].

The Appearance of Local Settlement Pattern

At the beginning of the 3rd millennium B.C., some radical structural changes took place in the political and socio-economic systems of both regions. In this period, the Uruk trade network, colonial system, and the centralised Mesopotamian-type early state system collapsed and public buildings of the Late Uruk Period at the sites of Arslantepe VIA, Hassek Höyük and Hacınebi were destroyed by fire[64]. This collapse is attributed to the nomadic groups of Trans-Caucasian origin (the Kura-Arax peoples) that spread over the expansive area of eastern Anatolia, northeastern Iran, Syria, Palestine and the south of Israel at the end of the 4th millennium B.C. and the beginning of the 3rd millennium.

[55] Frangipane 1996: 62; 1998: 198; 2001: 333, 336; 2001a: 3; 2002a: 124.
[56] Frangipane 2003: 154.
[57] Frangipane 1997: 67; 2001a: 329, 333, 336; 2002: 124, 126-127; Algaze 1999: 538.
[58] Frangipane 1998: 198; 2002a: 126, 129; Burney 1993: 314.
[59] Algaze 1993: 67; 1999: 542; Frangipane 1997: 56; 1998: 197; 2002a: 128.
[60] Frangipane 1997: 67; 2001: 337; Algaze 1993: 67; 1999: 542.
[61] Stein 2002: 151.
[62] Stein 1999: 5; 2002: 153.
[63] Stein 1999: 153; 2002: 151-153.
[64] Frangipane 1996: 65-66; Stein 1997: 192; Behm-Blancke 1997: 765.

While Trans-Caucasian cultural elements – characterised by wattle-and-daub and post-hole structures, round structures, rectangular structures with rounded corners, mould-made portable hearths, handmade red-black burnished pottery and stone-cist graves with rich funerary gifts – were seen in concentration in eastern Anatolian in the beginning of the 3rd millennium while only the tradition of stone-cist graves is seen as part of this culture in southeastern Anatolia.

This period completely differs from the Mesopotamian model in terms of urban development and political and economic organisation. Within this period, in both regions local urbanistic elements are prevalent although there is intense influence of Trans-Caucasian culture on the settlement pattern of eastern Anatolian. In Early Bronze Age II, eastern Anatolia revealed a culture that combined a local elaboration of East Anatolian/Trans-Caucasian cultural elements[65]. An indication of the different political organisations in the two regions during this period is that there are no administrative public buildings and administrative apparatus. These socio-political and economic differences may have come about because of the intense interaction between the Transcausian world and Anatolia[66].

At one of the settlements of eastern Anatolia, Norşuntepe level XXX, the occupation of Early Bronze Age IB is enclosed by a fortification wall 3-4 m. thick, with a saw-toothed outer façade of sundried brick on a foundation of stone[67]. Inside the enclosure wall rectangular dwellings of one or two rooms made of *kerpiç* stood independent of one another with disc hearths along paved alleys or streets[68]. This domestic architecture and settlement pattern are clearly a continuation of the local tradition followed in the Late Chalcolithic Period[69]. In Tepecik, another settlement in the region, the settlement of Early Bronze Age I-II was surrounded by a defence wall with towers of mudbrick on stone foundations and inside was a settlement of one- or two-room mudbrick houses rectangular in plan with disc hearths inside[70]. Tülintepe is another settlement with fortification wall in the Altınova Plain. The settlement of Early Bronze Age II exhibits pieces of a partially bevelled wall on a foundation of a diameter of 130 m, 2 m. thick, pointing to a considerably large-scale settlement for the period[71].

In Arslantepe VIB2, dated to Early Bronze Age IB period, a small village was established on an area of huts left behind after the Trans-Caucasian communities abandoned the settlement, which reflects the traditional settlement model of the Chalcolithic Period[72]. The settlement has been arranged functionally with a housing area,

[65] Frangipane 1992: 214; 1996: 67; 2003: 49; Frangipane *et al.* 2001: 136.
[66] Frangipane 2001a: 8; 2003a: 21.
[67] Hauptmann 1979: 58.
[68] Hauptmann 1979: 58; 2003: 24; Yakar 1985: 274.
[69] Yakar 1985: 274.
[70] Esin 1997: 1761.
[71] Harmankaya and Erdoğu 2002: Tülintepe.
[72] Frangipane 1996: 66; 2000: 449; 2003a: 21.

storage structures and specialised production areas[73]. The domiciles in the settlement have been built on narrow and perpendicular streets and reflect the local tradition with one- or two-room rectangular units with sundried brick walls on stone foundations (Fig. 4). A fortification wall 6 m. wide, on a stone foundation and made of sundried brick, in the upper region of the village is a sort of acropolis or fortified citadel[74] (Fig. 4). This wall is completely different from the Mesopotamian type and points to a new political strength and a different relationship between the elites and the common people[75].

Arslantepe VIC, dated to Early Bronze Age II, is made up of large well-planned mudbrick abodes with several spacious rooms with horse-shoe hearths in some[76]. In this period, Pulur-Sakyol displays a settlement pattern that will later be the characteristic form of Anatolian Early Bronze Age architecture. Named the "Anatolian Settlement Scheme", this plan is made up of adjacent houses, each with two rectangular rooms with horse-shoe hearths, standing on a stone foundation and with mudbrick walls, arranged radially around a wide courtyard (Fig. 5). Outside of these houses are wall fragments on stone foundations that are believed to be part of a fortification wall[77].

In southeastern Anatolia, where Trans-Caucasian influence is considerably weaker, a completely local settlement pattern is seen during this period. One of the settlements with such a totally local concept, Zeytinli Bahçe, has carefully constructed mudbrick masonary and plastered large rectangular dwellings that are separated from one another by streets[78] (Fig. 6). There is a tendency towards standardisation in the plans of houses and in building techniques, revealing a pre-determined urban plan of a significant degree at the site[79]. The settlement of Lidar Höyük, enclosed by a two-meter-thick mudbrick fortification wall, consists of one- or two-room houses of mudbrick with disc hearths inside[80], reflecting local settlement pattern. Likewise at Hassek Höyük, a local model of a fortification wall surrounding rectangular mudbrick houses that open onto narrow streets[81] can be seen. The contemporary settlement at Horum Höyük, also reflecting a local scheme, comprises well-built, spacious and rectangular one-room abodes with paved stone floors of mudbrick upon stone foundations. The level of architecture at the site is advanced[82]. The other site in the region, at Kenan Tepe, had two large fortification or retaining walls with stone foundations over a meter in diameter, dating to Late Chalcolithic 5 to Early Bronze Age I Period, around 3000 BC[83].

[73] Frangipane 1992: 212-213; 1996: 66.
[74] Frangipane 2001a: 8; Frangipane 2003c: 49; Frangipane *et al.*, 2001: 136.
[75] Frangipane *et al*, 2001: 136.
[76] Frangipane 1992: 214; 1996: 67.
[77] Harmankaya and Erdoğu 2002: Pulur-Sakyol.
[78] Frangipane 2002b: 147; 2003b: 56; Frangipane and Bucak 2001: 44; 2002: 44.
[79] Frangipane 2003b: 56-57.
[80] Hauptmann 2003: 61.
[81] Behm-Blancke 2003: 27.
[82] Tibet *et al.*, 2000: 140.
[83] Parker and Dodd 2003: 473.

CONCLUSION

The evidence presents a picture of local components in the development of initial stages of urbanism in eastern and southeastern Anatolia in the Proto-Urban Period. As pointed out above, urbanisation in both regions clearly has some local developments formed by local cultures with advanced complex social organisations, albeit some being affected by the Syro-Mesopotamian and Trans-Caucasian cultures since the initial stages of urbanism.

These local societies have a significant level of political and economical complexity from the first half of the 4th millennium onwards. They exhibit some key characteristics peculiar to complex societies, among these two-level site-size hierarchies, a complex economy that consists of highly technological development and a high-degree of specialisation, monumental administrative structures with sealed systems based on the stamp seal, economic centralisation and a redistribution system, class stratification reflected in the architecture, mortuary practice and mass-produced bowls for food distribution for unpaid workers – the control of labour – and long-distance exchange. The public building at Arslantepe VII suggests that the centralised society based on corvée labour and redistribution has already emerged in an entirely local cultural context in eastern Anatolia earlier than the spread of Uruk culture. In the Uruk Period, these local polities continue to show some local developments with some being affected by Mesopotamian culture. At Arslantepe VIA, the socio-economic organisation was based on the Mesopotamian system rather than the local organisational structures formed by the local elites in the Late Chalcolithic Period. Similarly, local features appear not only in structural organisation but also in the architecture, glyptics and craft production at the site. Hacınebi B2 carries entirely local characteristics although it lived with an Uruk enclave. At the beginning of the 3rd millennium B.C., however, in addition to the effects of Trans-Caucasian culture, both regions display local urban development and settlement patterns that reflect their own unique identities created through their own social, geographic and demographic structures as well as by the internal dynamics of their cultural environs that reach back into the Late Chalcolithic Period. This settlement pattern, which reflects a political organisation model, lacks public buildings of administrative character and a sealing system, and consists of small settlements, some of them fortified, with one- or two-room rectangular mudbrick houses opening onto narrow streets. It displays its own social structure based on the nuclear family.

Therefore both regions have their own settlement pattern based on local culture and appropriate to the urbanisation tradition of Anatolia with different types of political organisation. These regions had a unique identity created by local cultures and processes and played a unique role in the development of urbanism in Anatolia.

References

Abu al-Soof, B., 1969 – Excavationa at Tell Qalinj Agha (Erbil), *Sumer* XXV, 3-43.

Abu al-Soof, B., and Es-Siwanni, A., 1967 – Tell Qalinj Agha (Erbil), *Sumer* XXIII, 69-75.

Algaze, G., 1989 – The Uruk Expansion. Cross-Cultural Exchange in Early Mesopotamian Civilization, *Current Anthropology* 30, 571-608.

Algaze, G., 1993 – The Uruk World System: The Dynamics of Expansion of Early Mesopotamian Civilization (Chicago).

Algaze, G., 1999 – Trends in the Archaeological Development of the Upper Euphrates Basin of South-Eastern Anatolia during the Late Chalcolithic and Early Bronze Ages, in G.D. Olmo Lete and J.L. Montero Fenellos (eds), Archaeology of the Upper Syrian Euphrates: The Tishrin Dam Area, (Barcelona), 535-572.

Algaze, G., 2001 – Initial Social Complexity in Southwestern Asia. The Mesopotamian Advantage, *Current Anthropology* 42/2, 199-233.

Behm-Blancke, M.R., 1997 – Hassek Höyük, *Eczacıbaşı Sanat Ansiklopedisi* 2, 765.

Behm-Blancke, M.R., 2003 – Hassek Höyük, *Arkeo Atlas* 2, 27-29.

Burney, C. A., 1993 – Arslantepe as a Gateway to the Highlands: A Note on Periods VIA-VID, in M. Frangipane., H. Hauptmann., M. Liverani., P. Matthiae., and M. Mellink (eds), Between the Rivers and over the Mountains. Archaeologica Anatolica et Mesopotamica Alba Palmieri Dedicate (Roma), 311-317.

Erarslan, A., 2004 – The Initial Stages of the Urbanisation Process of Eastern and Southeastern Anatolia (5500-1900 BC), Unpublished PhD Dissertation, Istanbul Technical University, Istanbul.

Esin, U., 1997 – Tepecik, *Eczacıbaşı Sanat Ansiklopedisi* 3, 1760-1762.

Frangipane, M., 1992 – The Results of the 1991 Campaign at Arslantepe-Malatya, *Kazı Sonuçları Toplantısı* XIV/I, 213-229.

Frangipane, M., 1993 – Arslantepe-Melid-Malatya, in L. Costa (Hrsg.), Arslantepe, Hieropolis, Iasos, Kyme. Scavi archeologici italiani in Turchia (Marsilio, Venezia, Roma), 31-69.

Frangipane, M., 1993a – Local Components in the Development of Centralized Societies in Syro-Anatolian Regions, in M. Frangipane., H. Hauptman., M. Liverani., P. Mattiae and M. Mellink (eds), Between the Rivers and over the Mountains. Archaeologica Anatolica et Mesopotamica Alba Palmieri Dedicate (Roma), 133-162.

Frangipane, M., 1996 – Doğu Anadolu'da Kentleşme Modelleri, in Y. Sey (ed.), Tarihten Günümüze Anadolu da Konut ve Yerleşme, Habitat II (Istanbul), 60-69.

Frangipane, M., 1997 – A 4th-Millennium Temple/Palace Complex at Arslantepe-Malatya. North-South Relations and the Formation of Early State Societies in the Northern Regions at Greater Mesopotamia, *Paléorient* 23/I, 45-73.

Frangipane, M., 1998 – Changes in Upper Mesopotamian/Anatolian Relations at the Beginning of 3rd Millennium B.C., *Subartu* IV/1, 195-205.

Frangipane, M., 2000 – The Late Chalcolithic/EBI Sequence at Arslantepe. Chronological and Cultural Remarks from a Frontier Site, in C. Marro and H. Hauptmann (eds), From the Euphrates to the Caucasus: Chronologies for the IVth–IIIrd Millennium BC (Istanbul/Paris), 439-471.

Frangipane, M., 2001 – Centralisation Process in Greater Mesopotamia. Uruk Expansion as the Climax of Systemic Interactions among areas of the Greater Mesopotamian Region, in M. Rothman (ed), Uruk, Mesopotamia and Its Neighbors: Cross-Cultural Interactions and their Consequences in the Era of State Formation (Santa Fe), 307-348.

Frangipane, M., 2001a – The Transition Between Two Opposing Forms of Power at Arslantepe (Malatya) at the Beginning of the 3rd Millennium, *TÜBA-AR* 4, 1-24.

Frangipane, M., 2002 – Yakındoğu'da Devletin Doğuşu, Arkeoloji ve Sanat Yayınları (Istanbul).

Frangipane, M., 2002a – Non-Uruk Development and Uruk-Linked Features on the Northern Borders of Greater Mesopotamia, in J.N. Postgate (ed), Artefacts of Complexity: Tracking the Uruk in the Near East (Manchester), 123-148.

Frangipane, M., 2002b – Zeytinli Bahçe, Tunç Çağı, *Arkeo Atlas* 1, 146-147.

Frangipane, M., 2003 – Developments in Fourth Millennium Public Architecture in the Malatya Plain: From Simple Tripartite to Complex and Bipartite Pattern, in M. Özdoğan., H. Hauptmann and N. Başgelen (eds), From Village to Cities. Early Villages in the Near East, Studies Presented to Ufuk Esin (Istanbul), 147-170.

Frangipane, M., 2003a – Doğu Anadolu. Son Kalkolitik Çağ, *Arkeo Atlas* 2, 12-29.

Frangipane, M., 2003b – Zeytinli Bahçe, *Arkeo Atlas* 2, 56-57.

Frangipane, M., 2003c – Doğu Anadolu. İlk Tunç Çağı I Dönemi, *Arkeo Atlas* 2, 44-58.

Frangipane, M., et al., 2001 – New Symbols of a New Power in a "Royal" Tomb from 3000 BC Arslantepe, Malatya (Turkey), *Paléorient* 27/2, 105-145.

Frangipane, M., and Bucak, E., 2001 – 1999 Yılı Zeytinli Bahçe Höyük Kazı ve Araştırmaları, in N. Tuna., J. Öztürk and J. Velibeyoğlu (eds), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 1999 (Ankara), 65-161.

Frangipane, M., et al., 2002 – Zeytinli Bahçe Höyük 2000 Yılı Kazı Çalışmaları, in N. Tuna and J. Velibeyoğlu (eds), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2000 (Ankara), 41-101.

Harmankaya, S., Tanındı, O., and Özbaşaran, M., 1998 – Türkiye Arkeolojik Yerleşmeleri 3, Kalkolitik, Ege Yayınları (Istanbul).

Harmankaya, S., and Erdoğu, B., 2002 – Türkiye Arkeolojik Yerleşmeleri 4a, Ilk Tunç Çağı, Ege Yayınları (Istanbul).

Hauptmann, H., 1976 – Norşuntepe Kazıları 1972, in *Keban Project 1972 Activities*, METU (Ankara), 41-60

Hauptmann, H., 1979 – Kalkolitik Çağ'dan İlk Tunç Çağı'nın Bitimine kadar Norşuntepe'de Yerleşmenin Gelişimi, *Türk Tarih Kongresi* VIII/I, 55-64.

Hauptmann, H., 1982 – Norşuntepe Kazıları 1974, in *Keban Project 1974-75 Activities*, METU (Ankara), 15-70.

Hauptmann, H., 1997 – Norşuntepe, *Eczacıbaşı Sanat Ansiklopedisi* 2, 1353-1355.

Hauptmann, H., 1997a – Nevali Çori, *Eczacıbaşı Sanat Ansiklopedisi* 2, 1343-1344.

Hauptmann, H., 2003 – Norşuntepe, *Arkeo Atlas* 2, 22, 24.

Hauptmann, A., Schmitt-Strecker, S., Begemann, F., and Palmieri, A., 2002 – Chemical Composition and Lead Isotopy of Metal Objects from the "Royal" Tomb and Other Related Finds at Arslantepe, Eastern Anatolia, *Paléorient* 28/2, 43-70.

Hess, K., et al., 1998 – Evidence of Fourth Millennium B.C. Silver Production at Fatmalı-Kalecik, East Anatolia, in Th. Rehren, A. Hauptmann, J.D. Muhly (eds), Metallurgica Antiqua (Bochum), 57-67.

Lupton, A., 1996 – Stability and Change, Socio-Political Development in North Mesopotamia and South-East Anatolia 4000-2700 B.C., BAR International Series 627 (Oxford).

Özbal, H., 1997 – Early Metal Technology at Hacınebi Tepe, *Anatolica* XXIII, 139-143.

Özbal, H., Adrianes, A., and Earl, B., 2000 – Hacınebi Metal Production and Exchange, *Paléorient* 25/1, 57-65.

Özbal, H., and Turan, Ü., 2001 – Tilbeş Höyük ve Surtepe: M.Ö.3.binyılda Güneydoğu Anadolu Metalurjisi, *Arkeometri Sonuçları Toplantısı* 17, 59-71.

Parker, B.J., et al., 2002 – The Upper Tigris Archaeological Research Project (UTARP): An Overview of Archaeological Research Conducted at Kenan Tepe during the 2001 Field Season, *Kazı Sonuçları Toplantısı* XXIV/I, 1-20.

Parker, B.J., and L.S. Dodd., 2003 – The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2002 Excavations at Kenan Tepe, *Kazı Sonuçları Toplantısı* XXV/2, 471-482.

Parker, B.J., et al., 2003a – The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2001 Field Season, *Anatolica* XXIX, 103-174.

Rothman, M.S., 2001 – The Tigris Piedmont, Eastern Jazira and Highland Western Iran in the Fourth Millennium B.C., in M.S. Rothman (ed), Uruk, Mesopotamia and Its Neighbors: Cross-Cultural Interactions and their Consequences in the Era of State Formation (Santa Fe), 349-401.

Rothman, M. S., 2002 – Tepe Gawra: The Evolution of a Small Prehistoric Center in Northern Iraq, University Museum Monographs 112 (Philadelphia).

Schwartz, G. M., 1988 – Excavations at Karatut Mevki Perspective on the Uruk/Jemdet Nasr Expansion, *Akkadica* 56, 1-41.

Stein, G.J., 1997 – 1996 Excavations at Hacınebi Tepe, *Kazı Sonuçları Toplantısı* XIX/I, 179-209.

Stein, G.J. 1998 – 1997 Excavation at Hacınebi, *Kazı Sonuçları Toplantısı* XX/I, 183-203.

Stein, G.J., 1999 – Rethinking World-Systems. Diasporas, Colonies and Interaction in Uruk Mesopotamia (Tucson).

Stein, G.J., 2002 – The Uruk Expansion in Anatolia: A Mesopotamian Colony and its Indigenous Host Community at Hacınebi, Turkey, in J.N. Postgate (ed), Artefacts of Complexity: Tracking the Uruk in the Near East (Manchester), 149-171.

Stein, G.J., and Mısır, A., 1994 – Mesopotamian-Anatolian Interaction at Hacınebi, Turkey. Preliminary Report on the 1992 Excavations, *Anatolica* XX, 145-189.

Stein, G.J., et al., 1998 – Southeast Anatolia before the Uruk Expansion: Preliminary Report on the 1997 Excavations at Hacınebi, Turkey, *Anatolica* XXIV, 143-193.

Tibet, A., Marro, C., and Bulgan, F., 2000 – Horum Höyük 1999 Çalışmaları, *Kazı Sonuçları Toplantısı* 22/I, 137-145.

Trufelli, F., 1994 – Standardisation, Mass Production and Potter's Marks in the Late Chalcolithic Pottery of Arslantepe (Malatya), *Origini* XVIII, 245-291.

Van Loon, M., 1978 – Korucutepe 2 (Amsterdam).

Van Loon, M., 1981 – Korucutepe, *Arkeoloji ve Sanat Dergisi* 11, 3-8.

Yakar, J., 1984 – Regional and Local Schools of Metalwork in Early Bronze Age Anatolia, *Anatolian Studies* XXXIV, 59-86.

Yakar, J., 1985 – The Later Prehistory of Anatolia. The Late Chalcolithic and Early Bronze Age, BAR International Series 268 (Oxford).

Yakar, J., 1997 – Anatolian Trade with Syro-Mesopotamia Prior to the Establishment at the Assyrian Merchant Colonies, in H. Waetzoldt, H. Hauptmann (eds), XXXIV[e] Rencontre Assyriologique International (Berlin), 364-372.

Yakar, J., 2002 – East Anatolian Metallurgy in the Fourth and Third Millennia B.C.: Some Remarks, in U. Yalçın (ed), Anatolian Metals II (Bochum), 15-25.

Yener, A., 2000 – The Domestication of Metals: The Rise of Complexity Metal Industries in Anatolia, (Leiden).

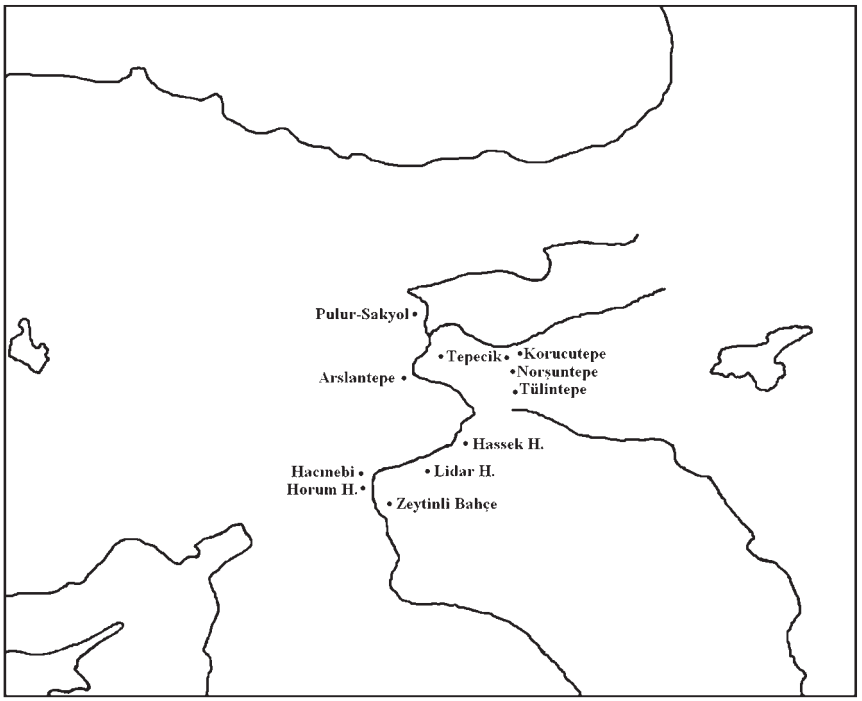

Fig. 1. Sites mentioned in the text.

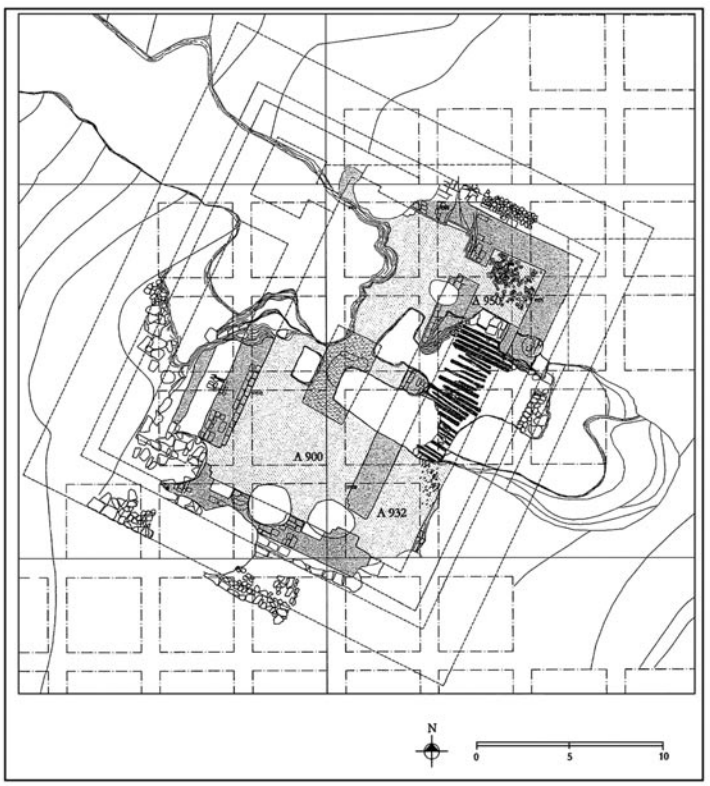

Fig. 2. Arslantepe VII. Building XXIX (Frangipane 2003).

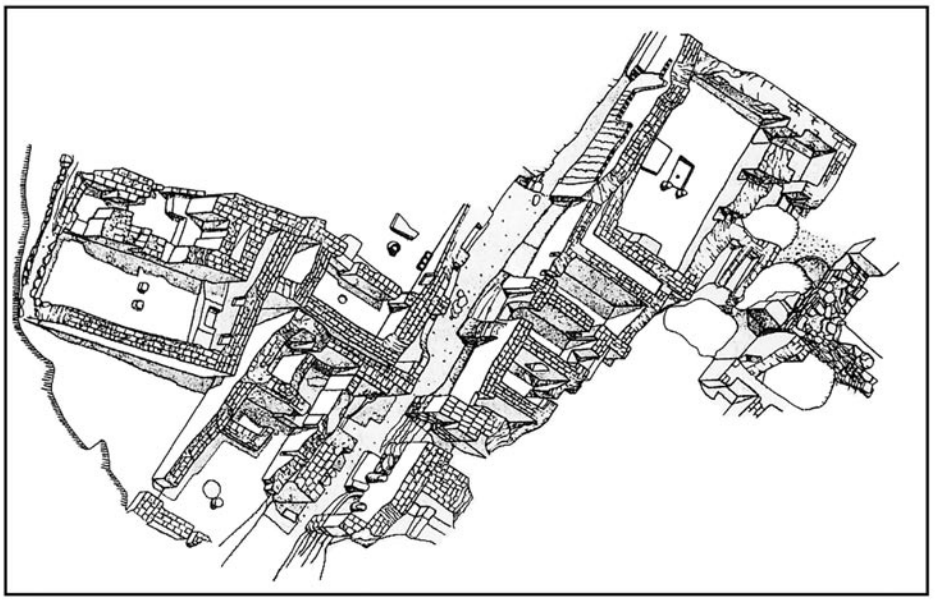

Fig. 3. Arslantepe VIA. Temple-Palace Complex (Frangipane 1997).

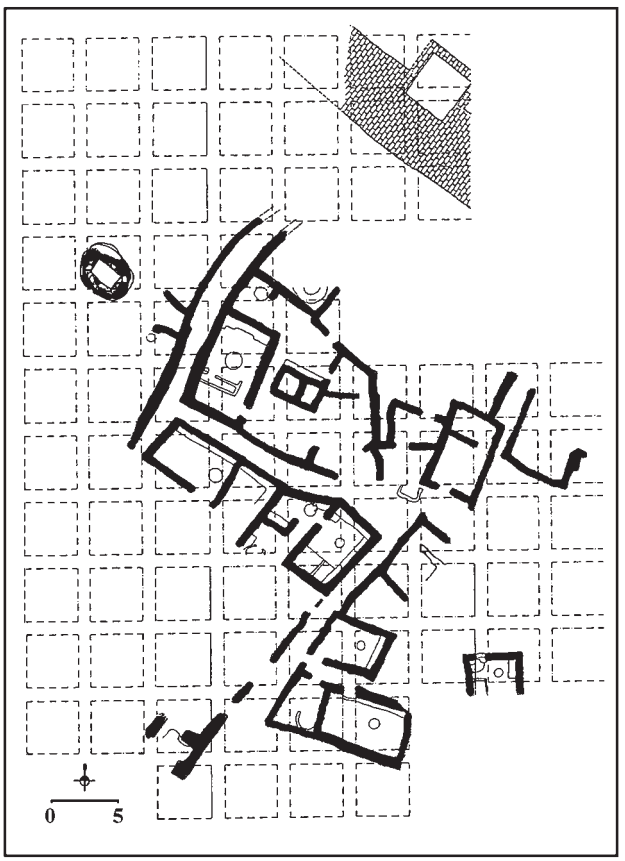

Fig. 4. Arslantepe VIB2 (Frangipane 2001a).

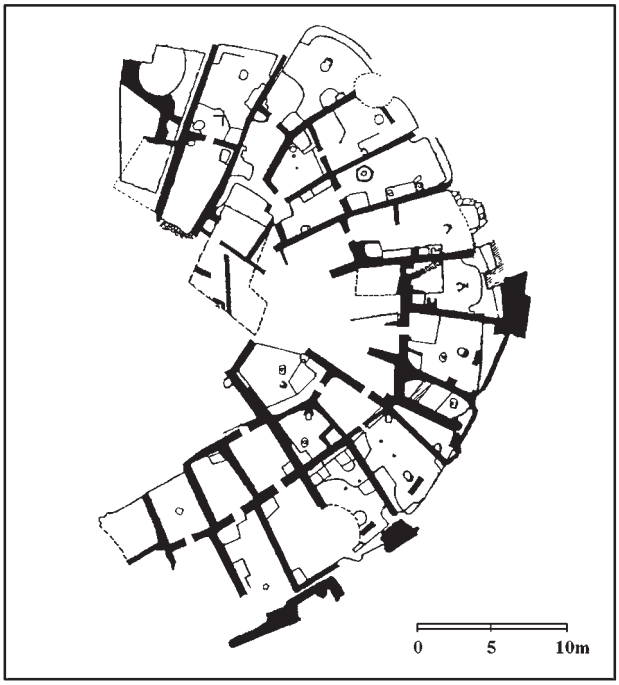

Fig. 5. Pulur-Sakyol (Yakar 1985).

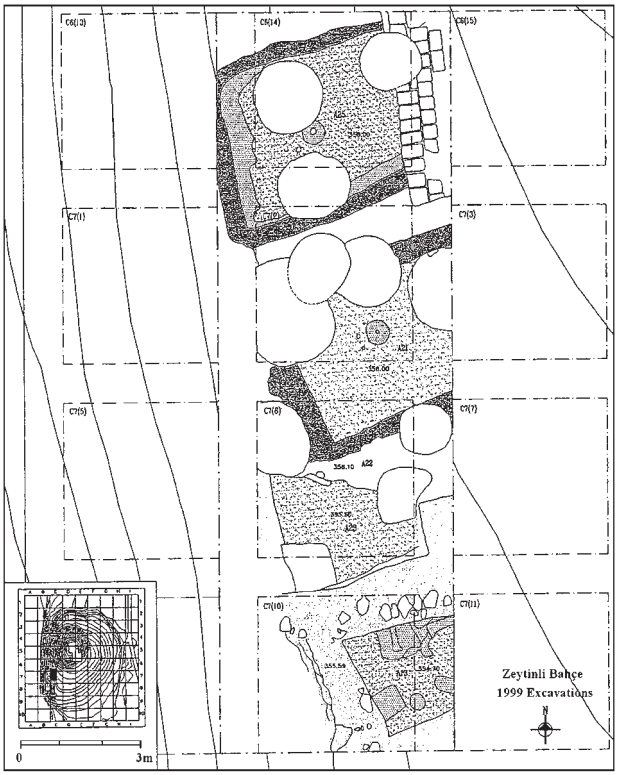

Fig. 6. Zeytinli Bahçe (Frangipane and Bucak 2001).

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THE UPPER TIGRIS ARCHAEOLOGICAL RESEARCH PROJECT (UTARP) – A Preliminary Report from the 2003 and 2004 Field Seasons at Kenan Tepe[1]

Bradley J. Parker,
Lynn Dodd, Andrew Creekmore, Elizabeth Healey and Catherine Painter[2]

INTRODUCTION

After three seasons of excavation at the site of Kenan Tepe, members of the Upper Tigris Archaeological Research Project (UTARP) conducted an intensive study season during the summer of 2003.[3] The 2003 study season was meant to allow us concentrated time, not only to process our existing data and prepare it for publication, but also to plan research strategies for future field seasons. The 2003 study season was followed by a fourth season of excavation during the summer of 2004.[4] The 2004 field season was meant to act as a foundation for a more focused excavation strategy that will be implemented in the second phase of our research at Kenan Tepe. For this reason we focused on several key questions that would shape our future direction. To implement this strategy, UTARP team members conducted eight operations in four areas of the site and began a remote sensing survey. What follows is a preliminary report of the research carried out during the 2003 and 2004 field seasons.

Kenan Tepe is a multi-period mound located on the north bank of the Tigris River approximately 15 kilometers east of the modern town of Bismil (figure 1). As noted in

[1] We would like to thank the Turkish Ministry of Culture and Tourism for granting us permission to conduct this research. We would also like to thank our Turkish government representatives, Melek Çanga (2003) and Ömür Tufan (2004). As always Necdet İnal of the Diyarbakır Museum was instrumental in his assistance to the project. The 2003 and 2004 field seasons were conducted with generous support from the United States National Endowment for the Humanities, the Curtiss T. and Mary G. Brennan Foundation, the University of Utah and the University of Southern California.

[2] Bradley Parker compiled and edited this article. He also researched and composed the introduction and conclusion (excluding the paragraphs on remote sensing) and the summaries of trenches D5, D8, D9, E2 and I2. Lynn Dodd is responsible for the section on the Ubaid ceramics. The section on remote sensing, as well as the summary of those data offered in the conclusion, is the work of Andrew Creekmore. Elizabeth Healey contributed the section on the lithics. The section on trench F1 is the work of Catherine Painter.

[3] Our team during the 2003 study season included Bradley Parker (Project Director, University of Utah), Lynn Swartz Dodd (University of Southern California), Andrew Creekmore (Northwestern University), Eleanor Moseman (Bryn Mawr College), Elizabeth Healey (University of Manchester), Kathryn Smith (University of Utah), Sibel Torpil (Bilkent University), and Bariş Üzel (Ege University). Our Turkish government representative was Melek Çanga.

[4] Project participants included Bradley Parker (Project Director, University of Utah), Lynn Swartz Dodd (University of Southern California), Andrew Creekmore (Northwestern University), Diana Backus, Emily Ogle (University of Southern California), Melissa Eppihimer (Harvard University), Nick Luby (University College, London), Catherine Painter (University of California at Berkeley), Jennifer Henecke (Boston University), Bariş Üzel (Ege University, Turkey), Sibel Torpil (Bilkent University, Turkey) and Eser Karaca (Ege University, Turkey). Our Turkish government representative was Ömür Tufan.

our previous reports, Kenan Tepe is composed of a high mound that rises 32 meters above the surrounding landscape, and a lower town that extends to the east and northeast of the main mound.[5] In our previous reports, we have suggested that the overall size of the visibly mounded area at Kenan Tepe measures approximately 6 hectares. We are now able to revise this estimate based on excavation and more comprehensive mapping begun in 2004. Using the remote sensing grid as a guide, we reached the following conclusions. The area of visible mounding, which includes spurs to the northeast, east and south of the main mound contains one hundred and thirty 20 x 20 meter grid squares equaling a total of 5.2 hectares. However, excavations in the areas directly south and west of Kenan Tepe's main mound (in parts of areas H and I) suggest that cultural remains in parts of these areas consist of erosional debris. Taking these data into consideration we estimate that occupational layers exist in only between 100 and 110 of the 20 x 20 meter squares in our mapping grid. Thus we must revise our maximum site size estimates to between 4.0 and 4.4 hectares. For the purposes of research we have divided the site into areas. Using the remote sensing grid as a guideline to estimate the total size of the areas that we know from excavation to have accumulated through cultural processes rather than erosion, we reach the following totals: Area F: 16 grids = 0.64 ha.; Area G: 29 grids = 1.16 ha.; Area H: 9 grids = 0.36 ha.; high mound (areas A, B, C and D): 51 grids = 2.08 ha. Adding these figures suggests that the total occupied area at Kenan Tepe is approximately 4.24 hectares.

Archaeological research between 2000 and 2004 has shown that Kenan Tepe was occupied during five broad periods: the Late Ubaid period, the Late Chalcolithic period, the beginning of the Early Bronze Age, the Middle Bronze Age and the Early Iron Age. During the medieval period a cemetery was dug into the top of the high mound.

THE 2003 STUDY SEASON

The goal of the study season, which took place between June 20th and July 25th, 2003, was threefold. Our first and primary objective was to process as much of the material excavated during our previous three seasons as possible. To this end, Lynn Dodd and Bradley Parker analyzed ceramics from all primary and most secondary contexts and continued to refine the Kenan Tepe ceramic typology; Andrew Creekmore processed the ceramics from the lower town; Elizabeth Healey analyzed the lithics from all primary and some secondary contexts; and Eleanor Moseman completed our small finds catalog. Bariş Üzel, Bradley Parker and Lynn Dodd drew over 500 sherds while Kathryn Smith photographed all drawn ceramics and small finds. Our second goal was to iron out several stratigraphic issues that had arisen during our off-season discussions of the site. To do so, Andrew Creekmore completed his analysis of the stratigraphy of the lower town, Bradley Parker and Eleanor Moseman researched the stratigraphy of the step trench, and Lynn

[5] For a more in-depth description of the site and its morphology see Parker *et al.* 2003a; Parker, Creekmore and Dodd 2004 and Parker and Dodd 2005.

Dodd and Bradley Parker analyzed the stratigraphy of Area D. Our third goal was to integrate these and other data into the project database. Kathryn Smith, Sibel Torpil and Bariş Üzel were instrumental in aiding us in this endeavor. Sibel Torpil also took charge of reorganizing the project depot.

EXCAVATIONS IN 2004

The 2004 field season, which took place between June 29th and July 29th, 2004, marked a turning point for the Upper Tigris Archaeological Research Project (UTARP). With the first phase of the project completed after a study season during the summer of 2003 and a number of reports and synthetic articles either published or forthcoming, we shifted our research to two key periods that have the most potential to have a substantial impact on the field of Near Eastern archaeology. This second and final phase of the project, which will take place between 2005 and 2008, will thus focus on the Ubaid and Late Chalcolithic remains at Kenan Tepe.[6] The 2004 field season was therefore meant to be an exploratory season focused on specific culture-history questions that would guide our problem-oriented research for the coming, and possibly final, phase of the project. These questions are:

1) What is the extent of Ubaid and Late Chalcolithic settlements at Kenan Tepe? And more specifically, does Ubaid and Late Chalcolithic occupation continue under Kenan Tepe's main mound?

2) What is the chronology of the Ubaid and Late Chalcolithic settlements? Is occupation at Kenan Tepe restricted to specific phases of these periods or is there a sequence of development at the site?

3) And finally, what kind of data can we hope to obtain through remote sensing at Kenan Tepe?

To address these questions, members of the Upper Tigris Archaeological Research Project (UTARP) opened four new trenches (trenches D8, D9, I2 and G4 [figure 2]), continued excavation in four existing trenches (trenches D5, E2, F1 and F7) and began a remote sensing survey during the 2004 field season.

[6] This course of action has been made possible by two multi-year grants. The first, from the Curtiss T. and Mary G. Brennan Foundation and greatly augmented by matching funds from the University of Utah, is underwriting three seasons of field research and one semester of further analysis of Kenan Tepe's Ubaid period remains. The second grant, from the United States National Endowment for the Humanities, is funding the project's infrastructure and research into the Late Chalcolithic period at Kenan Tepe over the same three-year period.

TRENCH SUMMARIES[7]

Area D Trench 5

During the 2002 field season, research on the Ubaid period concentrated on the domestic structure identified in previous seasons in trench D5 (hereafter referred to as *Ubaid Structure 1* [figure 3]). This house, which was partially contained within the south baulk of the trench, consisted of several mud brick walls demarcating two small rooms and separating them from a well-preserved outside work surface that was cut by a relatively large Late Chalcolithic oven or kiln. At least one of the rooms had plastered earthen surfaces. A large and well-preserved outside surface that abutted the north wall of the house contained numerous artifacts and other domestic debris *in situ* (see Parker and Dodd 2005 and figure 3). Although complete plans of these rooms were not obtained since only a small part of *Ubaid Structure 1* was contained within the trench, the small size of the exposed sections of these rooms suggests that they served as small basement chambers whose primary purpose was to elevate wooden living surfaces. Parallels for this type of construction can be found at several sites in Syria and Iraq (Hammade and Yamazaki 1995; Huot 1989; Jasim 1989; Nishiaki 1999). Although this hypothesis has yet to be tested, our hope is that further excavation will help us determine the function of these rooms.

Research in trench D5 during the 2004 field season had two main objectives. The first was to complete the excavation of *Ubaid Structure 1*, and the second was to excavate the levels below this structure to see if it rested atop earlier domestic architecture. We began by removing what remained of *Ubaid Structure 1* and then continued to excavate into the layers beneath it. The layers below this building were characterized by packed fill with only a few small pieces of what may have been earlier floors and walls. This suggests either that *Ubaid Structure 1* was the first and only Ubaid period structure to be constructed on this part of the mound, or that whatever structure or structures may have existed prior to this building were leveled during its construction. Although the contexts directly below this building did not yield coherent architecture, these sealed contexts did produce a small corpus of Ubaid ceramics (see below) and an obsidian arrowhead. A preliminary analysis of these ceramics suggests that they match very closely those discovered within and above *Ubaid Structure 1*. Although obsidian flakes were recovered in and directly above primary Ubaid contexts surrounding *Ubaid Structure 1*, the above-mentioned arrowhead is the first such artifact of this kind discovered at Kenan Tepe.

After removing a substantial amount of fill from below *Ubaid Structure 1* it became clear that this house was not founded upon earlier Ubaid architecture, or if it was, preservation is such that no remains could be recovered. To test the depth of this deposit we excavated a 1 x 1 meter sounding in the southwestern corner of trench D5. This sounding continued for 1.3 meters. It produced small amounts of ceramics and other

[7] The excavation of trenches D5, D8 and D9 was financed by the Curtiss T. and Mary G. Brennan Foundation. We would like to offer special thanks to Curtiss Brennan for his support.

cultural debris (although not in large quantities). No architecture was detected either in plan or in section although the presence of several ash lenses suggests that this space was utilized for a considerable length of time before the construction of *Ubaid Structure 1*. Although our sample is admittedly very small, we have noted a complete absence of fine ware ceramics and a very high proportion of rough ware ceramics in the sounding. There are several possible explanations for this. This distribution may be due to issues of recovery or preservation. However, this difference may also be chronological. Our current hypothesis is that in the earliest phase of occupation at Kenan Tepe, before the construction of *Ubaid Structure 1*, is characterized by a predominance of rough ware ceramics. Further research will be needed to test this hypothesis.

The removal of what remained of *Ubaid Structure 1* included the excavation of a large oven or kiln (L5126) in the central eastern portion of the trench (figures 3 and 4). This feature had originally been dated to the Ubaid period because it appeared to be abutting a surface directly outside *Ubaid Structure 1*. However, excavation during the 2004 field season showed conclusively that this feature dates to the Late Chalcolithic.

An analysis of the stratigraphy of trenches D5 and D9 (see below) revealed that during the Ubaid and Late Chalcolithic periods, Kenan Tepe's main mound was considerably smaller than it is presently. The data suggest that several meters of debris eroded from the top of the main mound some time in the third millennium. This very rough dating is based on the fact that Late Chalcolithic remains, such as the feature under discussion, cut directly into Ubaid period levels. They are then covered by considerable debris measuring as much as 2 meters. Slightly further up slope from trench D5 (in trenches D4, D6 and D7 [figure 2]), this debris layer is overlain by the second millennium street described in our previous reports (Parker and Dodd 2003; Parker *et al.* 2003a). Similar erosion debris was encountered in our step trench in Area A (Parker and Dodd 2003). Excavations during the 2004 field season revealed a clear line of demarcation between the intact Ubaid and Late Chalcolithic levels and the disturbed erosional debris. This line cut directly across both trenches from the northwestern corner of trench D5 to the southeastern corner of trench D9 (figure 3).

The stratigraphic data suggest that during the Late Chalcolithic period the inhabitants of Kenan Tepe cut several niches into the side of Kenan Tepe's main mound to form protected level surfaces for the construction of pyrotechnic facilities. Examination of four such features has led us to the conclusion that these were ovens used for baking and cooking, rather than kilns used for firing and/or smelting. This hypothesis is based on the fact that no wasters or slag have yet been recovered in or around these features, leading us to believe that they were not used for ceramic or metal production. It should further be noted that two pyrotechnic facilities excavated in Late Chalcolithic contexts in Area F are directly associated with domestic architecture and debris. A few small domestic artifacts were also discovered in association with one of the pyrotechnic facilities in Area D (L22+) including a stopper (D.9.20.11), and a loom weight (D.9.20. 4). Burnt clay pieces with smoothed concave surfaces were discovered in association with the same feature (D.9.20.12). We assume that these are the remains of earthen pot stands that were subjected to repeated contact with heated ceramic vessels. And finally,

ethnographic parallels consisting of ovens remarkably similar to those excavated at Kenan Tepe (see below), suggest that these types of facilities were probably loci of domestic production. Thus, until such time as contrary evidence becomes available, we will refer to these features as ovens.

Two Late Chalcolithic ovens were excavated in Area D during the 2004 field season: L5126+ in trench D5, and L22+ in trench D9 (figures 4 and 6, and see below). In both cases, hollowing out niches to create space for the construction of these ovens cut into the preexisting Ubaid strata. Excavations during the 2002 and 2004 seasons suggest that mud bricks were used to brace the vertical section created by at least one of these niches. Since bricks were placed against what was probably a freshly cut section, it initially appeared that the Ubaid surface outside *Ubaid Structure 1* was bonded to the bricks used to brace the section against which the oven was built. This led to our initial confusion over the stratigraphic position of this feature. It is now clear that construction associated with the installation of oven L5126+ cut into Ubaid levels. Ceramics excavated in and around this feature confirm that it dates to the Late Chalcolithic period (figures 11 and 12). Unfortunately, only a very limited number of ceramic sherds were recovered from in and around this feature and thus without carbon tests, we cannot further refine its dating. However, obvious parallels can be made with other Late Chalcolithic ovens excavated in several other excavation units at Kenan Tepe including trenches F1, F4 (Parker *et al.* 2003a) and D9 (for description see the discussion of trench D9).

Visible remains of oven L5126+ included a circle of mud bricks that lined the vertical section of the protective niche (figures 3 and 4). Within the niche, the oven itself was composed of a separately produced beehive-shaped tanoor-style domed core (see below for a more complete description of oven construction). An arch of mud bricks was placed inside the oven. We are uncertain whether or not mud bricks were packed around the exterior of oven L5126+ as was the case with a similar oven excavated in the neighboring trench (D9 L22+). However, it does appear that a coating of pisé was applied to the oven's exterior.

Area D Trench 8

In order to broaden our exposure of the Ubaid period house discovered in trench D5 (*Ubaid Structure 1*), UTARP team members opened two new trenches – D8 and D9 (trench D9 is described in the next section). Trench D8 is a 5 x 10 meter unit located directly south of trench D5 and east of trench D6 (figure 2). Since trench D8 began at the same level on the slope of the mound as trench D5, we knew that it would take at least two field seasons to reach Ubaid contexts, which lie as much as 2.5 meters below ground surface. As expected this trench immediately produced early second millennium remains. The discovery of contexts dating to the early second millennium in trench D8 is not, however, insignificant. Since trench D8 lies down-slope from trenches D4 and D6 where significant early second millennium architecture was excavated in previous seasons (Parker and Dodd 2003, 2005), these data suggest either that there was a considerable accumulation of debris during the early second millennium in this area (over 2 meters) or

that the early second millennium architecture was terraced into the side of Kenan Tepe's main mound. Although our suspicion has always been that terracing played a significant role in the horizontal location of remains from various periods at Kenan Tepe, early second millennium architecture discovered in trench D8 appears to underlie remains excavated in previous seasons in trenches D4 and D6. This suggests that the early second millennium contexts excavated in trench D8 may represent an earlier phase of occupation. Data from trench D8 also highlight the drastic effect that erosion has had on the site.

Excavation in trench D8 yielded parts of at least two structures. The first is likely represented by a small section of a thick wall (L17 measuring 1 meter in width) that entered trench D8 from the southernmost portion of the east baulk (figure 5). Only 1.3 meters of the length of this wall was preserved. A second smaller wall (L23) and associated surface (L32) entered the trench from the east baulk approximately 4 meters north of wall L17. It is not clear whether wall L24, surface L32 and wall L17 originally belonged to the same structure. We assume this architecture belongs to one or more structures the bulk of which is located east of trench D8 in the layers that lie between 1.5 and 2 meters underneath the second millennium street excavated in the neighboring up-slope excavation unit (trench D6).

In the northeastern portion of the trench UTARP team members uncovered the southwestern corner of a second large structure. It consisted of a large wall (L14) that measured nearly 2 meters in width. This wall entered the trench from the north baulk proceeding 2.2 meters before cornering into the east baulk (figure 5). Wall L14 is associated with a cobbled surface (L9) protruding into the trench from the north and west baulks. We assume this surface represents a street or pathway that was located west and outside the structure partially demarcated by wall L14. These remains dramatically illustrate the effect that erosion has had on this, and presumably other, sites in the Upper Tigris River region. Judging from the width of wall L14 it is safe to say that the building of which it was a part was relatively large. However, all that remains of this building is its southwestern corner. The rest of this structure, which presumably measured several meters on a side, is lost to erosion. These data not only suggest that during the early second millennium B.C. Kenan Tepe's main mound was considerably larger than it is today, but also that considerable erosional processes have removed several meters of cultural deposits.

Area D Trench 9

Trench D9 is located directly east and down-slope from trench D5 (figure 2). Because of the morphology and slope of Kenan Tepe's main mound, the dimensions of this trench were limited to 6 x 4 meters. Although our initial goal was to broaden our exposure of the Ubaid levels, excavation quickly revealed that any Ubaid period remains that may have existed in this area were destroyed by a Late Chalcolithic oven (L22+, figure 6) very similar to that excavated in trench D5 (above).

The unusual preservation of this oven allows a relatively detailed description of the method and order of its construction. The installation of this feature began with the

leveling of a space in the slope of Kenan Tepe's main mound. Like the oven excavated in the neighboring trench D5, this oven was located just inside the erosional line that marked the ancient edge of the mound (see above). A level surface was created by digging a niche into the slope of the hill. This niche probably provided some protection from the prevailing winds which, at least in modern times, tend to blow from the southwest. Unlike the oven in trench D5, we do not have evidence that mud bricks were used to brace the vertical section created by digging the niche. Debris was thrown downhill, packed and covered with a layer of mud bricks, thus creating a relatively level surface in the steep slope of the mound. This surface was probably about 3 meters in diameter. It was identified in excavation as packed earth and brick with numerous flat-lying pot sherds and other cultural debris.

The core of the oven was composed of a separately constructed beehive-shaped clay dome very similar to those still used in many parts of Turkey today. Modern oven cores are made and sold by specialists. Using a mixture of clay and cow dung, these artisans fashion oven cores by building up about 20 centimeters of the structure at a time. Once a portion of the core is in place, it is allowed to dry in the sun until hard before another 20 centimeters or so of clay is attached. A large opening is left in the top of the core and a small hole is made near its base. Although the full height of our Late Chalcolithic example was probably not preserved, a large venting hole undoubtedly existed at the top of the dome. The dome core was placed over four mud bricks that were set within the oven, probably to elevate fuel and allow air circulation. Mud bricks measuring 25 x 25 x 20 cm were then packed around the dome. Most of the oven was covered with one row of bricks, although the bottom two courses appear to have been two rows thick. Finally, this brick lining was covered with a thick coat of pisé. The result was a large beehive-shaped structure measuring 1.4 meters in diameter at its base. It was preserved to a height of 80 centimeters.

Numerous ethnographic parallels can be found in villages and towns all across southeastern Turkey (figure 7), where such ovens may serve the needs of several households. Since these facilities are basically communal, they are usually located in a make-shift shelter on the side of a street or alley. Modern neighborhood ovens are constructed in a very similar fashion to those excavated at Kenan Tepe. They are composed of a separately produced clay core that is covered with mud bricks and packed with pisé. These ovens are generally used for baking bread, although it is not uncommon to find them used for various activities related to cooking. Modern ovens are loaded from the top. Bread dough is stuck to the interior wall until baked. A small opening at the bottom is used to insert fuel and remove ash. Baking and cooking is done exclusively by women.

No clearly definable openings were discovered in oven L22+ although part of this structure was contained in the south baulk and thus it is possible that either, an opening may exist on the south side of this feature, or preservation did not allow us to identify such an opening. In any case, there must have been some sort of access to the lower portion of the kiln to facilitate inserting fuel and extracting ash. The fact that no side

openings for baking, cooking or other activities were discovered during excavation suggests that this was, like its modern parallels, top-loading.

Area E Trench 2

During the year 2000 field season, UTARP team members opened a 2 x 2 meter sounding in an area of modern disturbance on the eastern slopes of the high mound (trench E1, now renamed E2, see figure 2). At approximately 1.55 meters below ground surface, we reached levels containing a large collection of Ubaid period ceramics (Parker *et al.* 2002b). We were finally able to revisit this trench in 2004.

In order to broaden our exposure to these levels we widened the trench to 5.5 x 3.5 meters and renamed it trench E2.[8] This trench thus included the original sounding which, after cleaning the eroded baulks, measured 2.5 x 2.5 meters, and an expanded excavation area to the southwest of the original sounding, which measured approximately 3 x 3.5 meters. To minimize the height of the baulk directly over the northern section of the original sounding we also broadened the trench by 1 meter. Like the trenches in Area D discussed above, trench E2 is located on the steep slopes of Kenan Tepe's main mound. Thus the northern corners of the trench are considerably higher than the southern corners. For this reason, trench E2 is a good gage of the overall stratigraphy of Kenan Tepe's main mound. In broad terms, the stratigraphy of trench E2 can be divided into 4 levels dating to the early second millennium (level 1), the first half of the Early Bronze Age (level 2), the Late Chalcolithic period (level 3) and the Ubaid period (level 4).

Just below ground surface in the highest elevations of the northeast corner of trench E2 (L2+), we encountered at least four thick surfaces made up of multiple layers of ceramics and other debris (level 1), dated by a large corpus of red brown wash ware ceramics to the early second millennium B.C. (Parker and Dodd 2003). Part of what we believe to be the same surface was also visible, although at slightly lower elevation, in the west baulk and in the southwestern corner (L7) of trench E2. The similarity of these remains with the street identified in trenches D4, D6 and D7 (Parker and Dodd 2005), leads us to believe that this is, in fact, part of the same street, which, judging from the position of these surfaces in trench E2, turns and inclines as it follows the curvature of the site through Area E to the southern flanks of Kenan Tepe's main mound.

The layers below the second millennium street (level 2), which were excavated in the western extension of trench E2, are characterized by numerous large walls. Two factors complicate the interpretation of these remains. First, since trench E2 is located on the edge of the mound, inevitably any architecture identified in this area is likely to be the eroded edges of structures that protrude into this trench from deep within the mound. Second, excavation clearly shows that this area was subject to several phases of rebuilding. The ceramic corpus, although largely from insecure contexts, shows marked

[8] The dimensions and orientation of this trench were dictated by the size of the modern disturbance and by the slope of the mound. However, for ease of reference we will discuss this trench as if it were oriented to the cardinal directions.

similarities (with very little mixing with later material) to the early Bronze Age material excavated on other parts of the site including areas A and F. A large wall (L35) measuring 1.4 meters in width was identified running from the northeast corner of the trench into its western baulk (almost directly below the second millennium street). Two smaller walls (L37 and L38) intersect wall L35 from the south. Our working hypothesis is that the large wall (L35) may represent either a small portion of a fortification or retaining wall similar to those identified in trenches A2, A8 and C5 (Parker and Dodd 2005) or the southern edge of a large building. The smaller walls, L37 and L38, may belong either to structures that were later built up against the outside of this wall or they may be part of a protruding tower or other feature associated with this wall.

Although a handful of Late Chalcolithic ceramics were identified both in the fill surrounding the walls discussed above and in the original sounding, only very limited primary contexts that can be securely dated to the Late Chalcolithic period have been excavated in trench E2. Our assumption is that further excavation in the western portion of the trench below the Early Bronze Age (level 2) walls will reveal earlier (level 3) occupation.

After straightening the sections and clearing out debris from the original Area E sounding, this part of the trench immediately began to produce Ubaid period material. The primary Ubaid contexts consisted of a mud brick wall (L33) that crossed the trench from its south to west baulks. The supra-surface and surface contexts (L25+) north of this wall produced a significant amount of domestic debris including various types of Ubaid ceramics (see below), animal bones, chert, large amounts of obsidian, a spindle whorl or loom weight (E.2.18.11), a grindstone (E.2.12.5) and a hearth (L23). The soil in this area was characterized by a significant amount of ash and carbon. A small area southwest of wall L33 was also excavated. This context, designated L21, contained no artifacts and the soil color was significantly lighter than L25. Although this sample is admittedly very small, it nevertheless shows that Area E was the locus of significant domestic activities during the Ubaid period. We can not yet say whether L25 represents an inside or outside surface. However, in trench D5 a similar context yielding similar categories of domestic debris (Parker and Dodd 2005) has been shown to be an outside work area while inside surfaces were almost free of debris. These data would support the hypothesis that L25 was also an outside work area and that wall L33 represents the northern wall of an Ubaid domestic structure.

Area F Trench 1

Area F is located northeast of Kenan Tepe's main mound on a flat terrace approximately 23 meters above the Tigris River (figure 2). Work in this trench has spanned four seasons (2000, 2001, 2002) culminating in 2004 when we reached virgin soil at a depth of approximately 3.17 meters below ground surface.

The main goal of excavation in trench F1 during the 2004 field season was to acquire a complete sequence of the Late Chalcolithic occupation at Kenan Tepe by bringing this trench to virgin soil. We also hoped to further examine the various cobble

surfaces that were left unexplored at the end of the 2002 field season and, in doing so, illuminate the Late Chalcolithic period architecture or features present in the deepest strata of this trench. Excavation revealed that contexts located in the northeast corner and southern end of this unit included several superimposed surfaces (L1109, L1116, and L1117) composed of tightly-packed pebbles and crushed pottery. Stone grinders, pestles, and a large amount of animal bone (including teeth and jaw bones) found on and embedded within the surfaces suggest that food preparation or butchering activities took place on or near these surfaces. Numerous lithics, specifically obsidian debitage and flakes, were also recovered from surface contexts. Most notably two tripartite flint blades with serrated edges (L1117 KT1 and KT2) were discovered side by side *in situ* within the lowest superimposed pebble surface in the southern end of the trench. Worked stone needle fragments, a loom weight and several tiny shell beads further suggest that domestic activities, specifically cloth production, garment manufacture, and possibly jewelry assembly, took place in this area. These interpretations concur with data from several adjacent trenches (trenches F4, F5 and F7) where similar evidence of local domestic production has also been discovered (Parker *et al.* 2002a, 2002b, 2003a, 2003b; Parker and Dodd 2005).

Below these surfaces UTARP team members discovered a series of shallow subsurface fills (L1121, L1125) whose eastern edges were bordered by a narrow arching strip of light ashy inclusion. The excavation of several fill layers in the southeast corner of the trench revealed that this fill sealed a semi-circular ash pit (L1130) that cut 50 cm into virgin soil (a light yellowish brown fine clay fill with limestone inclusions). This pit contained copious amounts of carbon, ash and ceramic remains. After excavation soil subdivisions composed of alternating dark brown and ash layers were visible in the east and south sections. Charred bone and a quadruped animal figurine (L1131 KT4) were also discovered in the ashy adjacent fill.

Although the relationship between the pit (L1130), the basal level surface (L1117) in trench F1, and features previously unearthed at the same or similar elevations in the neighboring trench F4 is not entirely clear, we hypothesize that pit L1130 is a northern extension of ash and carbon residue from a large circular oven (L4009, L4027) excavated in the northwest corner of trench F4 during the 2000 and 2001 seasons (Parker *et al.* 2002a, 2003a; Parker and Dodd 2004). The location of this pit, which lies less than half a meter from the oven excavated in trench F4, and its elevation, which corresponds directly to the same oven, strongly support this hypothesis. The fact that both the F4 oven and the F1 ash pit are dug into virgin soil further strengthens this argument.

During excavation surface L1117 extended east at a 35- to 40-degree downward slope before ending abruptly just short of the southeast corner of the pit. Examination of the south baulk profile suggests that this surface may have abutted the top of the pit, although poor preservation on the surface's eastern edge (perhaps due to activities around the oven) make a direct connection between these features tentative. Likewise, none of the surfaces, pit or oven were found to be directly connected with the only mud brick wall to be uncovered at the very base of the trench. This wall (L1123), composed of a single course of seven to eight bricks bonded by mud plaster mortar, emerged perpendicular

from the north baulk and continued south for approximately 3 meters, terminating before reaching the compacted pebble surfaces along the southern baulk. Despite the fact that no physical connection between these features was detected archaeologically, we believe that this wall, along with the adjacent surfaces and pit, and the oven in the neighboring trench, are all depositionally associated.

The completion of excavations in trench F1 has helped to clarify the chronology of occupation in the lower town by providing a full stratigraphic sequence for the Late Chalcolithic period (LC 3-5; 3600-3100 B.C. [Rothman 2001]) as reflected in a single composite section drawing of the eastern baulk (figure 8). As discussed in greater detail elsewhere,[9] the Late Chalcolithic in Area F has been subdivided into seven stratigraphic phases (LC Levels 1-7), which can be briefly annotated here:

LC Level 1: Intrusive pit burials dating anywhere between the Early Bronze Age and Islamic Period.

LC Level 2: Cobblestone surfaces (F1, F2, F7), small ovens (F2, F8), and stone installations (F8).

LC Level 3: Round pits (F7 and F8), mud brick wall (F7), ash deposits (F9) and fill layers (F1).

LC Level 4: Debris from collapsed wall (F1 [Parker *et al.* 2003a, 2003b]) atop thin burn layer.

LC Level 5: Mud brick walls with associated earthen and cobblestone surfaces (F1).

LC Level 6: Cultural debris from pits and large oven (F4).

LC Level 7: Mud brick lined oven (F4).[10]

The compacted pebble surfaces excavated in the 2004 season correspond to the bottom of Level 5 and the whole of Level 6 (previously only recorded in trench F4). If we accept that pit L1130 in the southeast corner of F1 is associated with the oven from F4, or even if it is a separate installation in and of itself, then Level 7 is also present in trench F1. These data suggest that, unlike trench F4 where Levels 1 through 5 were removed as eroded slope deposits, trench F1 contains stratified excavation of all seven levels (figure 5). This trench will thus give vital insight into long-term occupation in this area over the entire latter half of the fourth millennium B.C. The association between the lowest levels of trenches F1 and F4 is also important for identifying activities that were carried out around the oven in F4. The compacted pebble surfaces excavated at the bottom of F1 are the first definitive domestic contexts to be tentatively associated with the oven (L4009, L4027) in F4. Furthermore, the fact that there are several superimposed layers that were

[9] See "Area F" in Parker *et al.* 2003a. Adjustments to Levels 4-7 are in Parker and Dodd 2005. An in depth analysis of the stratigraphic sequence will be published by A. Creekmore in a final report of these data that is currently in preparation.

[10] 2-sigma calibrated carbon dates taken from inside this feature are: 3350-2910 Cal BC (KT4061), 3360-3030 Cal BC (KT4157), 3630-3570 Cal BC (KT 4229) and 3660-3620 Cal BC (KT4253 [see Table 2 in Parker *et al.* 2003a]).

uncovered in 2004 and 2002 in trench F1 suggests ongoing use of this area. We anticipate further evidence to be drawn from other trenches in Area F, namely F2, F7, and F9, whose continued excavation will hopefully give us comparative results.

The lowest levels of trench F1 yielded local Anatolian Late Chalcolithic ceramics that complement the corpus previously excavated in this and surrounding trenches (see Parker *et al.* 2002a, 2002b, 2003a, 2003b; Parker and Dodd 2005 for reports on trenches F4 and F5). Common among this corpus are medium to large open bowls with plain rims (figure 9 J and M-S), hemispherical or carinated cups with rounded bead rims (figure 9 F, H, I, K and L), globular pots with everted rims (figure 9 B), necked jars with everted rims and round or oval bodies (figure 9 C and G), and several hammerhead-like bowls (figure 10 A-F).

Most of the ceramics in the Late Chalcolithic corpus are chaff tempered with fine micaceous and calcareous grit. Surfaces are often a buff, although some examples are chaff-faced (figure 9 A; figure 10 B, F). Both horizontal and vertical burnishing are common on exterior surfaces and occasionally this type of surface treatment is evident on interior surfaces, especially on open forms. Slip, wash and other surface treatments are rare. These data agree well with preliminary assessments of the Late Chalcolithic ceramics from other Area F trenches where only a few painted and reserve slip examples have been recorded to date. It should also be noted that there is a direct correspondence between the ceramics recovered in the lowest levels of trench F1 during the 2004 field season and those previously excavated from Levels 6 and 7 in trench F4 (Parker *et al.* 2003a: figure 12).

During the 2004 field season a group of ceramics was also recovered from contexts outside of Area F. In trench D9 an oven (L8) and adjacent fill (L20) provided a small cross-section of local Anatolian Late Chalcolithic diagnostic forms that are typologically similar to forms found in Area F. These include flat bases with grit and medium chaff tempers (figure 11 A, D, E and G), hemispherical and/or carinated bowls with rounded beaded rim (figure 11 F, G and L), simple-rimmed jars (figure 12 I-K), hammerhead-like bowls (figure 12 B, C and D), and incurved rim bowls and cooking pots (figure 11 I; figure 12 A). A straight spout example from trench D9 (figure 11 B) is similar to spouts on vessels from Hassek (Hoh 1981: Abb. 10: 1, 2, Abb. 22: 4, 5). A full profile example of a triangular shaped bowl with string cut base and heavy wheel striations recovered from the baulk inside the Late Chalcolithic oven in Trench D9 is closely paralleled at Hacınebi (Stein *et al.* 1996: figure 22 G).

The ceramics recovered from Levels 5-7 in trench F1 and the Late Chalcolithic examples from L8 and L20 in trench D9 have parallels at several sites including: Arslantepe VII (Frangipane 2000: figure 2: 6, 14, 26; figure 3: 6), Hacınebi A and B1 (Pearce 2000: figures. 3 a, d, figure 5 c, figure 7 b, e, i, figure 8 b, c, figure 9 a, e; Stein *et al.* 1996 figure 22 g), Hamman et-Turkman Period V A and B (Akkermans 1988a: Pl. 99: 20, 26, Pl. 100: 30, 37, Pl. 101: 43, Pl. 103: 68, Pl. 104: 79, Pl. 107: 97, 98), Hassek Late Chalcolithic levels (Hoh 1981: Abb. 8: 10, Abb. 9: 6, Abb. 10: 1, 2, Abb. 11: 5, 2, Abb. 17: 1, Abb. 22: 4, 5; Hoh 1984: Abb. 13: 9, Abb. 10: 6, 9), Korucutepe Phases A-B, strata I-XXIX and XXX-XLIV (Brandt 1978: Pl. 103: 14, 21, 22), Kurban VI (Algaze 1990:

Ware Group I: Pls. 17: J, 18: E, 20: I, 21: G; Ware Group II: Pls. 28: E, 29: E, 31: D, J, 37: E, I), and Leilan V (Schwartz 1988: Figure 57: 1, 2; Fig 58: 1, 8, 10, 12; Fig 61: 2).

Area I Trench 2

In an effort to determine the overall size of the Ubaid and Late Chalcolithic occupations that may lie beneath the main mound at Kenan Tepe, UTARP team members opened a 4 x 1 meter exploratory trench on the southern slopes of Kenan Tepe's main mound (figure 2). This trench was excavated in two steps. The first consisted of the northern 2 meters of the trench and the second consisted of the southern 2 meters of the trench. Both of these steps were excavated to approximately 2 meters below ground surface and later a 1 x 1 meter sounding was excavated in the first step another 2.5 meters. The data from this trench consisted almost entirely of ceramic material belonging to the early second millennium. No Ubaid or Late Chalcolithic ceramics were found and surprisingly little evidence of architecture was uncovered. These data show that the Ubaid and Late Chalcolithic settlements do not extend under Kenan Tepe's main mound. This combined with other data gathered over several seasons of field research at the site suggest that the Ubaid settlement is restricted to an area of no more that 1 ha. on the eastern slopes of Kenan Tepe's main mound – what was at the time a low natural hill. Although this site expanded considerably in the Late Chalcolithic period when occupation spread into the lower town, we have no evidence that this expansion included either the southern slopes of the main mound or the terraces south of the site.

The Ubaid Ceramics

This section focuses on the results of research on the Ubaid period ceramic assemblage unearthed at Kenan Tepe. It includes ceramics that were studied by Lynn Dodd and Bradley Parker during the 2003 study season and the 2004 excavation season, with some reference to recently excavated material where required for clarity or adequate characterization of the assemblage. This section has two goals. The first is to provide an overview of the typological categories used in the analysis of the Ubaid ceramics at Kenan Tepe.[11] The second is to situate Kenan Tepe's Ubaid ceramic corpus relative to other Ubaid period sites, especially those located to the southeast and southwest.[12] Ceramic research during the 2003 and 2004 field seasons aimed at capturing preliminary ceramic distribution and characterization information from all key excavated loci in order to refine our understanding of the assemblage which was preliminarily described in 2001

11 For the 2003 study season UTARP team member Peter Cobb designed a new pottery-reading data-entry front-end for the UTARP Information System (UIS) database. This greatly facilitated typological categorization of the ceramics. Improvements were also made to this data entry tool for the 2004 excavation season. Peter Cobb also designed a data-entry front-end for our typology recording system. For a preliminary discussion of the UIS database, see Parker et al. 2003a:143-5.

[12] Due to the expansion of Ubaid exposures in the 2005 excavation season, future reports will have the benefit of a much larger sample. Future reports will address the relationship of Kenan Tepe's ceramic corpus to other known Ubaid sites, including those to the north, which are not included in this report.

and 2002 on the basis of restricted horizontal exposures and a sounding (Parker and Dodd 2004; Dodd *et al.* 2005).[13] We especially hoped to define variation within and the distribution of vessel shapes which we believe may fall into functional categories. These categories include jars with necks and open deep basins (possibly used for storage or mixing); jars with wide mouths, short rims and occasional lugs (which might be interpreted as cooking pots); bowls, cups and deep platters (which might have been used for serving and eating).

The three broad type characterization (TC) categories (vessel shape, surface treatment and fabric) tracked in the UTARP Information System database (UIS) are described and illustrated in this section.[14] A special emphasis is placed on the ceramics excavated in trenches D5 and E2 (above).

Fabrics

All four of the fabric groups identified in our earlier report (Parker and Dodd 2005:72) were found to be present in the ceramics examined during the 2003 and 2004 field seasons. For the purpose of analysis and tracking, these four fabric groups have been designated Kenan Tepe fabric type characteristics 91 through 94 (TC 91-94).

The first and roughest quality fabric is fabric type characteristic 91. Fabric TC 91 is a poor quality, relatively low-fired fabric and temper combination that we refer to as "Ubaid rough ware." Ubaid rough ware has large chaff and some calcareous grit temper and breaks in a very angular fashion. Occasionally pebble-sized temper is visible. Sherds of this fabric usually have a black core.

Although not as rough as fabric TC 91, Kenan Tepe fabric type characteristic 92, what we refer to as "Ubaid course ware" is also fairly rough. Normally, fabric TC 92 has fine grit and medium to large chaff temper. Brown fabric colors predominate. Fabric TC 92 is often burnished on the exterior and frequently has fire marks. We hypothesize that fabric TC 92 was primarily used to construct vessels for cooking and heating.

Two fine ware fabrics have been identified in the Kenan Tepe corpus. The first is Kenan Tepe fabric type characteristic 93. Fabric TC 93, referred to as "Ubaid medium ware," generally has fine grit and medium to large chaff temper. Some vessels are chaff impressed. Thicker regions may have a black core. The fabric is usually fairly well-levigated and compact and exhibits straight, small grained breaks. This is a distinct

[13] Key loci vary in definition, but generally speaking a key locus is a secure or sealed context, ideally from a primary deposit. Material from key loci is selected for closer analysis, drawing and photography during ceramic processing. Since some of the material analyzed during the 2004 excavation season remained to be drawn and photographed during the 2005 season, a number of the conclusions outlined here should be considered preliminary until such time as additional research can be completed.

[14] We have discussed our ceramic terminology elsewhere (Parker and Dodd 2003). For the sake of clarity we will briefly repeat those definitions here. Three attribute sets are being tracked during the analysis of the ceramics from Kenan Tepe. These include: surface treatment, form, and fabric. We refer to these attribute sets as type characteristics (TC). By surface treatment we mean any purposeful manipulation of the surface of a vessel including slip, wash, paint, incisions, impressions, smoothing, burnishing, or plastic applications. Form refers to a vessel's physical shape. Fabric is an aggregate term used to describe the texture, color and treatment of the material from which a vessel was made.

difference in comparison with fabric TC 93 and fabric TC 94, which exhibit much more angular breaks. There are occasional examples that have inclusions of pebble-sized grit but this is an exception to the general character of the fabric (see figure 17 B). A range of vessels from very large jars to small cups have been recorded in fabric TC 93 although the predominant vessel forms are open bowls and platters, incurved rim bowls, and angled rim jars.[15]

The finest fabric identified in the Kenan Tepe corpus is fabric type characteristic 94. Fabric TC 94 is referred to in the Kenan Tepe typology as "Ubaid fine ware." This fabric normally has fine calcareous grit and fine to medium chaff temper, is low to medium fired and exhibits straight fine grained breaks. Normally no black core is evident. This fabric is most frequently used to construct small bowls and cups and occasionally small, fine jars.

In functional terms, the four fabrics may be more conveniently summarized as comprising two broader groups based on the vessel shapes in which they are found. The two rougher fabrics (fabric type characteristics 91 and 92) constitute one group and the two finer fabrics (fabric type characteristics 93 and 94) constitute the other group. Almost without exception, the fine flared rim cups, open deep bowls, and incurved rim bowls are composed of one of the two finer fabrics (fabric TC 93 and 94). Almost without exception, the globular jars with small tapering rims and everted rim jars are composed of the two rougher fabrics (fabric TC 91 and 92). Fine ware fabrics were generally used to construct what we refer to as angled rim jars (figure 13 C and E; figure 17 H and G) and open serving vessels while the coarser fabrics were used for vessels whose mouths are smaller than their bodies' widest point but which do not have angled rims. Blackening is most frequently found on vessels made of fabric TC 91 and TC 92. Blackened examples of vessels made of the two finer fabrics (fabrics TC 93 and TC 94) have yet to be found. These data suggest that vessels made of fine fabrics (fabric TC 91 and TC 92) were used for serving and display while those made of rough wares (fabric TC 93 and TC 94) were used in the context of cooking or heating or were exposed to smoke blackening for some other reason (for example, figure 19 E is blackened on the interior).

The only Ubaid period overfired sherds or wasters found at Kenan Tepe thus far are composed of fine fabrics (see for example figure 19 A). There are no examples of overfired sherds or wasters among the two coarser fabrics. One explanation for the lack of coarse wasters is that the two coarser fabrics were not manufactured on or near the excavated contexts. Alternatively, they may have been fired with better heat control. In either case, the presence of fine fabric wasters suggests that small-scale pottery making was carried out in or around the Ubaid period structures and outside surfaces excavated at Kenan Tepe. Only one overfired sherd was painted, suggesting that domestic craft

[15] An instance of a large jar fashioned of fabric TC 93 is D.8.89.4.1, which has an everted rim and a diameter that is among the largest of Kenan Tepe's jars at 46 cm. Another large jar with fabric TC 93 is illustrated on figure 13 C.

production may have focused on unpainted vessels (bowls and medium jars) made of the two finer fabrics.[16]

The character of Ubaid kiln structures is known from sites such as Tell Abada (Jasim 1985:53) and Tell al-'Abr (Hammade and Yamazaki 1995:7) where industrial-scale pottery production was carried out. However, other pot-firing certainly took place on a smaller scale in domestic contexts. Firing may occur in a pit with a temporary cap under which both the fuel and the pots are placed. Such an installation would leave few traces, aside from a pit with ash debris in and around it and wasters from misfired or overfired pots. These tell-tale signs were used to infer the presence of large pottery kiln sites at al-'Ubaid and Eridu even in the absence of excavated kiln structures (Moore 2002). A candidate for such a small-scale, and possibly domestic, firing installation at Kenan Tepe was excavated in trench D8. A pit (D8 L58) was associated with a surface (D8 L52) on which several broken *in situ* pots were discovered. Warped, misfired pot sherds made of fabric TC 93 (D8.58.1.1 for example) were found in the pit and a cone of ash extended from it.

Vessel Forms

Form refers to the vessel's physical shape and we will use the terms form and shape interchangeably. This type characteristic set is often defined by a specific or unusual trait such as a carination or a particular rim shape. The most common Ubaid shapes are flaring rim cups and small bowls, deep platters, deep bowls or open basin jars, angled rim jars, and globular body jars that occur in various fabrics, with various surface treatments and in various sizes. A summary of the most common shapes follows.

Shape TC 91 is a hole-mouth deep bowl or jar (figure 22 C). The rim is often beveled so that it slants toward the inside of the vessel. Alternatively, the rim may be articulated with a slight beading or tiny lip on its exterior side.

Shape TC 92 (figure 13 B and D; figure 20 A, C and E) is a round or ovoid pot or jar whose body may be globular or bag-shaped and which has a short everted rim that is often pinched and tapering. The rim is usually not set at a defined angle to the body but curves outward without a sharp angle. The rim finishing can be slightly uneven, perhaps due to the handmade finishing of a fairly coarse fabric. This form has been recorded in a range of vessel sizes. Many of the pots in this category are fashioned of the rougher fabrics. Some examples are burnished and a number of examples are blackened. Two examples have unpierced lugs attached to the body of the vessel. A single very small jar at Kenan Tepe is painted (figure 14 E). No incised shape TC 92 jars have been recorded.

Shape TC 93 (figure 14 E; figure 17 G, H and I; figure 20 D) is a jar whose rim has a sharper angle of connection to the body of the pot than is the case for shape TC 92. We use the term angled rim jar as a convenient means of distinguishing shape TC 93 jars from shape TC 92 jars because these jars generally have a more elongated rim that is connected to the shoulder at a more acute angle. They also generally have more sharply

[16] Examples include an overfired vessel D8.58.1.2 and a vitrified vessel E2.18.3.1 (not illustrated).

articulated rim/neck joins than do the shape TC 92 jars. No entire profile of a shape TC 93 jar has yet been reconstructed, but it is likely that these ovoid pots have flat or possibly slightly rounded bases. The distance between shoulder and lip of the rim usually is between 3 and 8 cm. Unlike shape TC 92 jars, angled rim jars tend to be made from the two finer fabrics. None of the shape TC 93 vessels recorded have blackened surfaces, although some are painted. Painted designs on these jars tend to be horizontal bands around the rim, neck and shoulder. Occasionally, where the body is preserved there may also be bands around the body and looping lines often appear (small or large) as an added motif.

Shape TC 94 includes a range of hemispherical open bowls or cups whose sides do not curve inward at the rim (figure 15 F, G and H; figure 16 A, B and D; figure 18 E-I).

Shape TC 95 is an open jar or deep basin jar (figure 22 H). This shape type characteristic is usually identified by the presence of a sharply-everted, horizontal rim that is occasionally rounded or pinched. The body wall descends at a near vertical angle immediately below the rim. Since no complete profiles have yet been reconstructed, we are not sure what base shape is associated with these vessels. At Ziyadeh similar forms, which are referred to as "ledge-rim basins," occur throughout the Ubaid 4 sequence (Arzt 2001:116). Deep open jars or basins also occur at Tepe Gawra in XIIA and XII (Tobler 1950). No directly comparable examples are published from Hammam et-Turkman. Tell Abada has variants of this form throughout its Ubaid 1-3 sequence. Clear parallels also exist at Tell Madhur (Roaf 1989:110).

Shape TC 96 (figure 22 F) is a shallow open bowl. Normally this shape is wider than it is deep. Shape TC 96 is less often painted than is the case with other bowls. Instead this shape type characteristic often exhibits scraping on the exterior surface (figure 22 F). This surface treatment is also known from Levels 2 and 3 at Tell al-'Abr, where scraped bottoms appear on open bowls, inturned and hole-mouth bowls, and deep bowls (Hammade and Yamazaki 1995:5). Examples at Kenan Tepe that exhibit this surface treatment include inturned bowls and and holemouth pots (figure 22 A and C).

Shape TC 97 designates a vessel base that is either flat (figure 14 H) or slightly rounded (figure 14 I).

A few ring bases have been identified in the Ubaid levels at Kenan Tepe (figure 22 D). This shape has been designated shape type characteristc 98. At Ziyadeh only three ring bases were found in levels 13, 14, and 16. At Tepe Gawra, ring bases occur first in level XIII and become more common in levels XIIA and XII (Tobler 1950: 140, 146, #106). Ring bases infrequently appear in the Hammam IV sequence (Akkermans 1988b: 118) and occur more often in Tell al-'Abr (Hammade and Koike 1992). A raised base attributed to the Ubaid 2/3 phase was found in Tell Songor C. This base supported a cup with a triangle motif at the rim and horizontal stripes around the body (Fujii 1981; Jasim 1985: figure 285:6). The Tell Songor example has a very similar decorative motif to a cup with no preserved base that was found at Kenan Tepe in pit D8.58 (sherd D.8.58.8.7). It should also be noted that at Tell Madhur each size-category of bowls included one bowl set atop a ring base (Roaf 1989).

Shape TC 99 is an incurving rim bowl (figure 18 C; figure 22 A).

Shape TC 101 is a tripod base (figure 22 E). This base is not a base, *per se*, but actually is a collection of three individually attached legs. The single example found at Kenan Tepe supports a bowl that was associated with a burial. In this case, the vessel and its legs are still attached. Because such bases are made of individual tapering legs that attach separately to the bottom of the vessel, it is possible that other examples have not been recognized because the legs and the vessel have become detached. None of the other examples of this bowl shape thus far analyzed have legs or leg attachment scars. Possible vessel legs were identified at Ziyadeh, but there too their occurrence is rare (Arzt 2001).

In summary, two different shapes of closed vessels are common in the Ubaid levels at Kenan Tepe. The first category of jars has a tendency toward taller rims that join the body at a defined angle (figure 17 H). Shape TC 93 jars are made in fine and medium fabrics (fabric TC 93 and TC 94). The second category of closed vessels is globular jars (shape TC 92). Rim heights, jar size, and degrees of rim eversion vary. Most of these jars have a bag or globular body shape (for the range, see figure 14 E and I; figure 18 B; figure 20 A). There are four common open shapes in Kenan Tepe's Ubaid levels. These are a wide shallow bowl that sometimes has a scraped exterior (figure 18 D; figure 19 N); a category of bowls that subsumes bell-shaped cups (figure 15 F, G and H; figure 18 E, F and G), small open bowls (figure 15 A-E; figure 16 A, B and D) and deep open basins or deep bowl-like jars (figure 22 H). Lenticular jars, which are characteristic of Ubaid 3 assemblages, have not been found at Kenan Tepe.

Surface Treatments

During the 2003 and 2004 field seasons, decorative treatments were categorized in the Kenan Tepe ceramic typology in the following ways: incised designs were designated surface treatment TC 90; bichrome painted designs were designated surface treatment TC 91; burnishing was designated surface treatment TC 92; paint on a slip-covered fabric was designated surface treatment TC 93; and paint on an untreated fabric was designated surface treatment TC 94.

Surface treatment TC 90 (incised designs) is not common in the Kenan Tepe corpus. Nevertheless, three kinds of incised designs are so far attested. In the first case, circular incisions were made by dragging a reed or similar plant-sourced tool around a vessel prior to firing so that the incision itself is marked by striations left by the reed or plant fibers (figure 19 E). In the second case a multiple line comb like incision was etched into the vessel exterior before firing (figure 13 F; figure 19 E). The third incising technique is dimpling (not illustrated). Dimpling is created by using the end of a thin object, such as a reed, to make oblique punctures in the surface of a vessel prior to firing (figure 19 I). Decorative treatments such as these appear at most late Ubaid sites where vessels bearing this type of surface treatment are classified as either incised or impressed wares. However, the practice of incising vessels was much more common in southern and central Ubaid sites. It appears that the potters at Kenan Tepe may have been familiar with the practice of surface texturing but were not inclined to invest the more considerable labor that would be required to achieve some of the more elaborate surface effects that are known at other sites such as Tell Abada (Jasim 1985: plate 9b); Hammam et-Turkman

(Akkermans 1988a; 1988b), Tepe Gawra (Tobler 1950; Rothman 2002; Rothman and Blackman 2003) and Tell Madhur (Roaf 1989). At Tell Madhur necked jars were often incised. At Kenan Tepe, most of the incised sherds belong to angled rim jars (figure 19 E and K; figure 13 F). It is noteworthy that the particular realizations of textured surfaces that were used at Kenan Tepe require the least sophisticated tool repertoire of all the impressed or incised pottery known in the Ubaid (compare with examples shown in Rothman and Blackman 2003).

Bichrome decoration (surface treatment type characteristic 91) is extremely rare in the sample analyzed thus far at Kenan Tepe. In figure 19 A, the undulating line is executed in a redder paint than the horizontal bands. The contrast between colors is not dramatic so that it is possible that this could have been a firing effect rather than a difference in chemical composition of the paints. If this is true, then the bichrome effect on the sherd described above is the result of firing a single paint that was applied with variation in either brush stroke breadth, weight of stroke, or paint thickness, which led to different hues during a single firing.

Burnishing (surface treatment type characteristic 92) is normally somewhat patchy and it is more common for burnishing to occur on fabric TC 91 and fabric TC 92 (the coarser fabrics) than on fabric TC 93 and fabric TC 94 (the finer fabrics). There are very few instances when careful burnishing has been applied to an Ubaid vessel at Kenan Tepe. One of the more carefully burnished vessels is the black tripod-base bowl described above (figure 22 E). Otherwise, the rare exceptions of a fine burnish are body sherds slipped in a red color.

A handful of red-slipped and burnished sherds have been discovered at Kenan Tepe although they are extremely rare. The few red-slipped and burnished sherds that have been recovered are small and extremely worn suggesting that these examples may originate in an earlier stratum (cf. Leenders 1989). Similar pottery is known from Gawra level XIII (#185 [brown fabric with red burnished slip]), Brak (Oates 1987: 170) and at Choga Mami and Ras al Amiya. At these last two sites the chaff tempered fabric is red slipped on both the exterior and interior surfaces and many examples are burnished (Oates 1982:258; 1969:139; Stronach 1961:121-2). They are unusual in Hammam et-Turkman IV and occur in small numbers at Tell Ziyadeh throughout the sequence, increasing in level 13 and later (i.e. Late Ubaid [Arzt 2001:110]).

Surface treatment TC 93 designates paint applied on a light-colored slip. As research progressed, it became clear that there were very few instances when vessels were truly slipped prior to painting. Even when a thin, cream-colored layer was found on the exterior or interior surfaces of a darker-colored fabric, normally we could not be certain that the vessel was slipped (Arzt 2001). Differential firing conditions can cause a vessel to have cream-colored areas while other parts of the same vessel are another color, such as orange, grey-green, or red-brown. A jar sherd (not illustrated, D.10.6.1.4) has been fired in this manner, so that it appears to have a cream slipped beneath some portions of the painted motifs and is unslipped beneath other portions. At present, it is not possible to determine whether an intentional decorative effect was being sought, that is, whether the Ubaid potters were deliberately manipulating the surface colors through controlled firing.

Surface treatment TC 94 (paint on an untreated fabric) is the most common decorative technique in the sample excavated at Kenan Tepe thus far. It is achieved through the contrast between a dark paint and an orange, brown, gray, greenish, red or cream fabric onto which the paint is applied. Paint colors range from black (5Y 2.5/1) and dark grays (10YR 3/2; 10YR 4/1; 7.5YR 4/1) to purplish or reddish-browns (2.5YR 3/2; 5YR 4/4; 7.5YR 5/2; 7.5YR 5/3; 7.5YR 3/4; 7.5YR 3/2; 7.5R 3/1; 7.5R 3/2; 10R 3/2). The paint colors recorded at Kenan Tepe are similar to the range found at Tell Madhur (including black and sometimes brown or red). Overall, black and grey paints are the most common at Kenan Tepe. Red and purplish hues are more common from *Ubaid Structure 1* (trench D5). Whether this results from differential paint composition or different firing practices remains to be determined. Jasim (1985:160) suggests that red is an underfired version of black. If this is the case, then the potters at Kenan Tepe more frequently underfired their pots in the period when *Ubaid Structure 1* was occupied than they did in the subsequent strata.

There is far more unpainted pottery than painted pottery in the Ubaid levels at Kenan Tepe. Within certain vessel classes there is a greater likelihood of paint occurring (on bowls, for example), but overall painting is present only on a minority of vessels. At Tell Madhur, the excavator noted that shallow bowls and large deep bowls tend not to be painted (Roaf 1989:106). This is generally the case with vessels at Kenan Tepe, and most especially with the shallow bowls. At Tell Madhur the ratio of painted pottery to unpainted pottery is high; painted pottery comprises a smaller portion of the ceramic assemblage than is the case in earlier Ubaid sites (Roaf 1982; Moon and Roaf 1984). Note that at Hammam et-Turkman, a site which is as distant from the core Ubaid traditions in the south, as Kenan Tepe is, the proportion of painted pottery is small throughout the entire Ubaid sequence (Hammam et-Turkman IV A-D) and declines through time from a high of 17.6% to a low of 2.4% (Akkermans 1988b:112). At Tell al-'Abr, pottery from the later levels (levels 2 and 3) is plainer than earlier strata and forms show less variety (Hammade and Yamazaki 1995:5). Painted sherds are also in the minority at Warka in the post-Eridu Terminal Ubaid levels (Oates 1983:262). At Tell al-'Abr on the upper Euphrates, only 15% of the excavated Ubaid assemblage was painted. At Tepe Gawra, although most of the sherds that were kept by the excavators were painted (88%), Rothman's survey of whole vessels saved by the excavators showed that 88% were not painted (Rothman 2002:55). These data suggest that there is a general decline in the dominance of the painted ceramic tradition at the end of the Ubaid period. The percentage of painted pottery has not been quantified yet for Kenan Tepe but a qualitative impression based on our preliminary analysis indicates the painted component of the ceramic corpus is more significant at Kenan Tepe than at, for example, Hammam et-Turkman. In spite of this, painted pottery does not dominate the assemblage.

The clearest pattern noted between different classes of type characteristics at Kenan Tepe is the restriction of painted decoration to the two finest wares. No painted examples composed of fabrics TC 91 or TC 92 have yet been found. Instead, all painted decoration appears either on TC 91 (Ubaid medium ware) or TC 92 (Ubaid fine ware).

This is a point of contrast with some southern sites, such as Tell Madhur, where simple globular jars are sometimes painted (Roaf 1989:112).

The corpus of Ubaid period ceramics thus far excavated at Kenan Tepe is closely paralleled at Hammam et-Turkman level IV B and IV C. In particular, the decorative schemes on bowls and angled rim jars from Kenan Tepe and from Hammam et-Turkman IV C share a propensity for broadly executed designs and at both sites, solid black fields of paint are not common (Akkermans 1988b:117; figure 5: 57, 58). Other good comparisons with the Hammam et-Turkman level IV material include figure 4: 47, which is similar to an angled rim jar associated with *Ubaid Structure 1* (figure 17 H). An unpainted jar found at Hammam et-Turkman is directly paralleled by a very large, angled rim jar (diameter=46 cm), found at Kenan Tepe (figure 22 G). The fabric and shape of this vessel is also paralleled by smaller jars found at Hammam et-Turkman (such as Akkermans 1988b figure 10:154; diameter = 25 cm).

Decorative motifs exhibited on Ubaid ceramics excavated at Kenan Tepe fit well within the range of the late Ubaid decorative repertoire known from sites such as 'Oueili and Hammam et-Turkman. For example, figure 18 F is a small cup that is decorated with hatching like that found on a range of shapes at 'Oueili in level Obeid 4 (pottery number S.135 from Huot 1989:35 figure 17 for example). The color range of the paint is also similar to that found in Obeid level 4 at 'Oueili where purple-brown to deep black hard, matte paints are common (compare with descriptions in Huot 1989:36). The net or intersecting lines motif (figure 18 F) is paralleled by a cup from Hammam et-Turkman IVB, although greater control and precision in execution causes the space between the lines to be more regular on the Hammam et-Turkman example (Akkermans 1988b: figure 4:45). A larger bowl from Hammam et-Turkman level IVA (figure 2: 7) has the uneven spacing seen on the small Kenan Tepe cup.

A fairly common motif on jars from Kenan Tepe is horizontal bands and loose wavy lines that undulate near the rim. Examples of this motif are illustrated in figure 17 H and figure 22 B. This motif is paralleled by material from level IVB at Hammam et-Turkman (Akkermans 1988b: figure 4:47). Pendant loops hanging from a line at the rim are also a common decorative motif at Kenan Tepe, especially in bowls. This motif is also found at Ziyadeh in level 14 (Arzt 2001: figure 3-52), which is attributed to the LC 1 or "terminal Ubaid" period (equivalent to Hammam IVD [Akkermans 1988a]).

Decorative motifs that are not common in the sample excavated so far at Kenan Tepe include: dots in diamonds paralleled at Ziyadeh (Arzt 2001: level 4 figure 3-18 #7) and identified in the Mandali surveys (Oates 1968 plate IX: 19); stacked triangles (figure 18 I) paralleled at Ziyadeh in a context equivalent to Tepe Gawra XIII (Arzt 2001: level 5 see figure 3-24); opposing elongated triangles above multiple thin horizontal bands paralleled at Hammam et-Turkman in level IV C (Akkermans 1988b: figure 5:64); triangles with horizontal lines around the rims of cups (figure 21 C) known from Tell Songor C (Jasim 1985: figure 254: 6; cf. Fujii 1981) and Hammam et-Turkman level IVA (figure 2:7 and figure 2:19); undulating lines bounded by two thin horizontal bands set within two larger horizontal stripes (figure 19 A) paralleled at Hammam et-Turkman level IVD (Akkermans 1988b figure 6:75); triangles with hatching below the vessel neck

(figure 17 J) which occurs in Tepe Gawra XIIA; "x" shapes within a square void (figure 19 C) paralleled in level XII at Tepe Gawra (Tobler 1950: figure 246); and intersecting lines that form diamonds which are infilled with dots and bounded by a register of thin bands (figure 21 E) paralleled in level XII at Tepe Gawra (Tobler 1950: figure 269). Sprig ware has not been identified at Kenan Tepe, although a single sherd has a painted design that may be a more elaborate version of this motif (figure 21 A).

A jar at Madhur has a painted herringbone motif on its shoulder (Roaf 1989:115) and this same motif appears on a body sherd from Kenan Tepe (figure 19 F). Tell Kashkashok provides a parallel for the circular motif that resembles exaggerated caprid horns with a dot in the center of the unclosed double circle. This motif appears on a very thin-walled bowl at Tell Kashkashok (Cluzan *et al.* 1993:76), however its color and execution are similar to Kenan Tepe's late Ubaid example (figure 16 A). A middle Ubaid example is noted in Ziyadeh level 5, which is considered contemporary with Hammam IVC (Arzt 2001 figure 3-25 #117). This long-lived motif occurs also in Ziyadeh level 14 (equivalent to Hammam et-Turkman IVD or terminal Ubaid). The four best parallels for the Kenan Tepe example are from level 14 at Ziyadeh (Arzt 2001 figure 3-48 see #242-245). The negative circular motif (figure 16 F, G and H) was also found in Ziyadeh in level 14 (figure 3-47 #237).

At Hammam et-Turkman the painted pottery has clear connections to the Ubaid traditions, but the plain wares are unlike southern Ubaid plain wares (Akkermans 1988b). The opposite appears to be true at Kenan Tepe, where plain wares, such as unpainted cook pots and bowls, are similar to the plain wares found in more southerly sites like Madhur or Ziyadeh. However, unlike the sites in the Hamrin (Jasim 1985) or the southern alluvium (such as 'Ubaid, Eridu XII and later, Ras Al-Amiya, or 'Oueili) there are no bent clay nails (mullers), no stamp seals, and few clay balls found thus far in the excavations of the Ubaid levels at Kenan Tepe. The architectural features and the pottery assemblage anchor Kenan Tepe's relationship to traditions known at other sites, but with respect to the full range of small finds, the sample excavated thus far at Kenan Tepe is different in these respects. Like the situation at Hammam et-Turkman, we appear to be dealing with a subset of the total range of Ubaid material culture (Akkermans 1988b:112) and we might best characterize Kenan Tepe as a northern Ubaid-related site with late Ubaid-related pottery.

Discussion

During the 2003 and 2004 field seasons we made considerable progress in the characterization of Kenan Tepe's Ubaid period ceramic corpus. Although still preliminary, these data allow us to make some initial comparisons between Kenan Tepe and other Ubaid period sites.

The Ubaid corpus at Kenan Tepe shows the strongest affinities with Ziyadeh and Tepe Gawra. However, the parallels from Tepe Gawra include both Str. XIII and Str. XIIA and XII, a period that spans the end of the Ubaid and the earliest Chalcolithic (LC1), including a break in time between two occupations (Rothman 2001). There are also some parallels to what has been described as Ubaid 4 pottery. Ziyadeh's Ubaid 4

pottery is approximately similar to Gawra XIII, Leilan VIb, and Hammam et-Turkman IVC (Arzt 2001). Some motifs are similar between Gawra XIII and Kenan Tepe's Ubaid material, but the better correlation for Kenan Tepe's Ubaid corpus is with Ziyadeh level 14, Hammam et-Turkman IVD and Tepe Gawra XII, where numerous shapes and decorative motifs common at Kenan Tepe are represented. The ceramic assemblage at Kenan Tepe has a few similarities to examples known in Ubaid 3 tradition. A greater degree of similarity exists between Kenan Tepe and those sites with the latest Ubaid occupations, including Ubaid 4/Ubaid transitional such as Tell Ziyadeh levels 14 and higher, Hammam et-Turkman level IV, Tell Madhur, Tepe Gawra XII, XIIa (and to a much lesser extent XIII). These correlations suggest that Kenan Tepe's Ubaid period occupation dates to the end of the Ubaid sequence, including Terminal Ubaid/LC 1 (using Rothman's [2002:56] designations).

Many of these sites that show strong ceramic parallels with the Kenan Tepe corpus are dated somewhat later in absolute terms (see discussion of C14 dates in Parker and Dodd 2005:90). Abada II has yielded radiocarbon dates of 4670 +/-70 B.C. calibrated but stylistically it is attributed to the Ubaid 2-3 periods. Ziyadeh's phase III (immediately post-Ubaid) has yielded dates with a combined range of 4460 B.C. to 4330 B.C. (Wright and Rupley 2001:98). Tell Madhur produced dates of 4470 +/- 80 B.C. calibrated (Roaf 1982:43) and stylistically its pottery is attributed to the Ubaid 4 period. Kenan Tepe has produced dates of ca. 4650 B.C. calibrated (Parker and Dodd 2005:72). Stylistically its pottery is most strongly associated with Ubaid 4/5 or terminal Ubaid or LC1 period. Ubaid 4 dates from 'Oueili are between 5300 and 4600 calibrated B.C. (Valladas *et al.* 1996; Arzt 2001:108). Perhaps as the length of phases within the Ubaid period are discussed and revised, these discrepancies will be addressed.

Taken together with carbon dates, this preliminary analysis of the ceramic data from Kenan Tepe supports the hypothesis that Kenan Tepe was part of a settlement dispersal in the mid-fifth millennium B.C. At this time, people making Ubaid and Ubaid-related ceramics established small communities in Syria, southeastern Turkey, northern Iraq and Iran. This trend may also have seen the establishment of at least seventeen other very small (less than 3-4 ha.) village sites in the river valleys of the Upper Tigris, Garzan, Batman, and Cizre (Algaze *et al.* 1991) including Yenici Yani (Bernbeck, *et al.* 2004), Salat Tepe (Ökse 2004:635); Giricano (Schachner and Schachner 2003); Türbe Höyük (Velibeyoğlu *et al.* 2002: 838, figures 13-15), although in all of these cases the precise dating of these sites is not known. Other Anatolian sites that should be included in the larger network of Ubaid or Ubaid-related sites include Değirmentepe (Esin 1983; 1994), Norşuntepe and more than a dozen others (see Gürdil 2005:36-38).

Lithics

This section summarizes the results of research carried out on 581 chipped stone artifacts that were recovered from primary contexts during the 2004 field season. The majority of these artifacts (443) come from Ubaid contexts; the remainder are from Late Chalcolithic, Early Bronze Age and Middle Bronze Age contexts. Both flint and obsidian

were used as raw materials in all four of these periods. Artifacts made of obsidian comprise about 35% in the Ubaid levels and 28% in the other contexts. The types present are summarized in Table 1.

		Flint							Obsidian					
Area	Context	Cores and struck nodules	Flakes	Blades	Indet frags	Formal retouch	Hammerstones	**Total**	Cores	Blades	Flakes	indet	Formal retouch	**Total**
D	?	1	14	1	4			**21**	1	2	7			**10**
E	?	1	10	1	2	1		**15**	1	1	8			**10**
F	?	3	30		1	1		**36**			4		1	**5**
G	?							**0**			2			**2**
D	Chalco		11		3			**14**	1	2	3			**6**
D & E	E/MBA		5		2			**7**			2			**2**
Sub total non Ubaid		**5**	**70**	**2**	**12**	**2**		**93**	**3**	**5**	**26**		**1**	**35**
D	Ubaid	3	139		4	4		**150**		16	39	1	2	**58**
E	Ubaid	4	117	3	3	7		**134**	5	7	82			**94**
Total Ubaid		**7**	**256**	**3**	**7**	**11**		**284**	**5**	**23**	**121**	**1**	**2**	**150**

Table 1

Raw Materials

The inhabitants of Kenan Tepe used flint of various colors. Opaque matt flint of light-grey or grey-brown, which tends to become pinkish when heated, is most common. The occasional piece of more translucent flint is also present. To judge from the cortex most flint seems to have derived from river cobbles, although occasional pieces with fresher cortex were also noted. The majority if not all of the flint is likely to have been acquired locally.

Obsidian, on the other hand, does not occur locally, the nearest sources being at Bingol and Nemrut Dağ over 100 kilometres to the north or north east. Several pieces have remnants of the outer surface present suggesting that obsidian reached the site in a relatively unprepared state. When viewed under transmitted light a variety of colors are present: black and green predominate, accounting for 56% of the Ubaid sample and 36% of the sample from other periods. Some of the black obsidian is very coarse and thus may be from the outer part of the nodule. This observation is supported by the fact that about half of the pieces from the Ubaid levels in trench E2 have cortex on them. The remaining

8% of the sample includes transparent brown and grey colors and there are a few pieces of reddish obsidian. The green obsidian almost certainly originated from the peralkaline sources at Nemrut Dağ or Bingol, and it is probable that the black and translucent brown obsidians come from the calcalkaline source at Bingol (Healey 2000). This, however, needs to be confirmed through geochemical analysis.

Flint Technology

There are seven flint cores and struck nodules from Ubaid contexts and four from other contexts. None are particularly regularly worked and often amount to little more than struck or tested nodules. Part of the apparently non-systematic working of the cobbles may be due to the shape of the parent nodule and the stage of reduction when discarded, as some of the flakes have regular scarring patterns on their dorsal surfaces suggesting that more regular reduction was also practiced (Healey forthcoming).

The removals consist almost entirely of broad flakes and those of blade-like proportions are unusual. Only three true blades are present. Over 60% of the flakes are complete; they tend to be squat – the majority falling between 40 and 60 mm (39%) in length with 27% being longer than this and 31% between 20 and 30 mm. In the Ubaid levels over 42% have cortex on the dorsal surface. There is a slight difference in proportions of examples with cortex between areas D5 and E2: D5 having only 33.8% with cortex, whereas in trench E2, 52% of the flakes have cortex on them. A more detailed technological analysis will be carried out on the complete Ubaid assemblage. This will include material from other field seasons, but at this stage it may be worth noting that many of the flakes show resolved bulbs of percussion and ring cracks, both of which are indicative of hard hammer flaking.

Modification

Modified artifacts are rare accounting for just over 3% of the assemblage. The following types were present.

Type	Ubaid levels	LC, EB and MB
Glossed	4	
Piercers	2	1
Scrapers	2	
Denticulate		1
Worn edges	1	1
Other retouch	1	1
Hammerstones	1	1
Chopper	1	

Table 2

In addition several of the flakes have chipped edges, which, apart from one regularly flaked piece, is probably due to post-depositional damage rather than to use.

Glossed pieces. There are three blade-like pieces with gloss along one edge. These three examples are similar in overall shape (figure 23 A, B and C). In each case the distal end has been retouched and in two instances (figure 23 A and C) the proximal end has also been modified (one inversely). The gloss extends to the flake ridge on the dorsal surface and forms a narrower band on the bulbar face. The gloss does not extend for the entire length of the edge, stopping short of the proximal end, suggesting that the butt may have overlapped another element or have been encased in some sort of binding or haft. The fourth is a squat flake with a hinge fracture with gloss on the right edge (figure 23 D). Macroscopically visible gloss is often associated with cutting silica-rich vegetal material such as wheat, either as a sickle or in a threshing sledge. Although this is a like explanation for the presence of gloss, this theory needs to be verified through use-wear analysis.

Piercers. This is a heterogeneous group of objects consisting of pieces with retouch forming a point. The most pronounced point is on the side of a flake (figure 23 E). The point is off-set by retouch forming two opposed concave areas; the point itself has abrupt retouch. Two other examples (figure 23 F and G) are more blade-like and have retouch on their distal ends demarcating a point. A fourth artifact (figure 23 J) has minimal retouch forming a sharp spur (which could be fortuitous) and abrupt retouch along the left edge.

Scrapers and Denticulate. A large flake (figure 23 K) has abrupt retouch on its left side forming a convex and slightly denticulated edge. The rest of the flake is unworked. Figure 23 H is an end scraper with semi-abrupt retouch across its distal end and a straight contour. A third object has tentatively been included in this group. It is a fragment of a flake (D.9.16.2 #1 [not illustrated]) that has abrupt retouch around its perimeter, but forms an irregular shape. The denticulate (figure 23 I) is made of a fragment of a thick, cortical flake. The flake-scars are positioned adjacent to each other (i.e. they do not overlap as in scale-flaking) around approximately three-quarters of its circumference and form a denticulated edge.

Blades with worn edges. Fragments of two blades show a marked rounding on the edge. One (figure 23 L) is a fragment of a prismatic blade of brownish flint. The right edge is worn smooth, apparently from working some hard material as the edge is also chipped in some areas and not worn completely smooth. The other object (figure 23 M) has similar abrupt chipping and some rounding. Vertical striations across the thickness of the blade are visible on both pieces at 20x magnification.

Other retouch. One flake of blade-like proportions (figure 23 O) has abrupt retouch on its thicker, left edge as if forming a back; the right edge is convex in shape and has light chipping or retouch on in. A thick blade (figure 23 N) has minimal but regular light retouch on its left edge, which seems to be deliberate and so has been singled out from other pieces with chipped edges. Also included in this category is an unclassifiable fragment of a thick flake (E.2.22.4 #3 [not illustrated]), which has abrupt retouch on both sides and light minimal retouch or possibly damage on its considerably thinner distal end. Its superficial resemblance to deliberately retouched objects may be fortuitous as there are

many incipient cones of percussion on the surface of the flint suggesting that it may have been subjected to harsh treatment.

"Chopper". A thick flake of beige flint (not illustrated) has a bevelled right edge formed by some sort of percussive action or abrasion. The edge of the striking platform is also heavily abraded. Its function is unclear.

Hammerstones. Two cobbles have areas of abrasion on them, normally associated with hammerstones. One (E.2.25.7 #1 not illustrated) is an elongated cobble measuring some 65mm in length by 55mm in width. It is 50mm thick. This artifact is extensively abraded from some percussive action around most of the circumference and particularly so at the rounded ends. Part of the surface has some flake scars which may be an attempt to shape the object rather than indicative of use as a core. The other (E.2.22.2 #1 not illustrated) is fragmentary with abrasion on the outer rounded edge of the cobble. The rest is flaked but very unsystematically showing very short scars.

Obsidian

Obsidian is found in all contexts and accounts for 33% of the raw material represented in the sample with, as noted above, the majority coming from Ubaid contexts. It accounts for approximately 28% of the chipped stone artifacts from trench D5 and 62% from trench E2. Green obsidian is more ubiquitous in the D5 Ubaid contexts than it is in E2 Ubaid contexts where black obsidian accounts for 78% of the sample.

General Description. The artifacts of obsidian are mainly flakes, blades being relatively rare (15% of total) although they form a higher percentage in trench D5 (28%).[17] Whole blade cores are absent. The cores that have been recovered are small or fragmentary with flaking on all sides (figure 24 L and O). Other pieces show signs of having been struck on an anvil at least in their latter stages (i.e. with flake scars from opposing directions as in figure 24 J, K, M and N and are described as *piéces écaillé*). Sometimes it is difficult to distinguish between cores and flakes produced in this manner.

Over half of the obsidian flakes from trench E2 Ubaid contexts have some cortex on their dorsal surfaces whereas only three flakes from the trench D5 Ubaid contexts have cortex. The flakes from trench E2 are quite large measuring over 50mm in length (figure 24 P, Q and S) and one is an early stage flake some 60mm in length (figure 24 Q). The curvature of the cortical surface suggests that the nodule from which it was struck was at least 90mm in diameter.

Although several of the blades have light retouch along their edges examples from trench D5 (figure 24 C and G) are more deliberately retouched and slightly serrated. One thick blade-like piece (figure 24 E) has bifacial retouch along the right side forming a bevelled edge and inverse nibbling retouch on the other.

Blades with worn edges. A fragment of a prismatic blade of good quality green obsidian (figure 24 B) has one edge heavily worn or ground forming a bevel. Its ventral

[17] Blades and flakes are present in roughly equal proportions in the assemblage from D5 excavated up to 2002.

surface is also very scratched. Another blade, also of green obsidian (figure 24 A) has round or worn edges with vertical striations visible at x20 magnification.

Arrowheads. Two arrowheads were recovered. One is a small transverse arrowhead from trench F1 (Late Chalcolithic [figure 24 D]) made on a blade segment with its edges abruptly retouched. The other is a small stemmed or barbed arrowhead measuring 25 mm in length, 10 mm in width and 3.5 mm thick and weighing 2g (D.5.5190.27, figure 25) made from a piece of obsidian which appears to have cortex on both faces. It has been bifacially flaked over most of the surface forming a regular profile but leaving a small patch of cortex on both sides. The stem or barb is formed by a sharp angle on the lower third of the object.

Discussion

Chipped stone was found in most contexts, although in significant numbers only in the Ubaid levels. Thus the question of residuality, particularly in the Middle Bronze Age levels, must to be considered. The chipped stone assemblage provides conclusive evidence of stone working in the Ubaid and forms part of a growing body of evidence that chipped stone tools were a routine and necessary part of everyday life during the Ubaid period. The knapping is, however, expedient though the apparent crudity of the technology may have as much to do with the shape of the raw material as to the skill of the knapper. Obsidian was a numerically important raw material even though it had to be obtained from some distance away. There seems to be a difference in the way obsidian is used between areas D5 and E2, manifest in proportions present, color and technology. Obsidian also seems to have a significance for the Ubaid inhabitants of Kenan Tepe beyond the utilitarian, in that it is also made into bowls and beads (Parker and Dodd 2005: 72).

Remote Sensing Survey[18]

During the 2004 field season members of the Upper Tigris Archaeological Research Project (UTARP) began a remote sensing survey of Kenan Tepe.[19] The goals of this work were to evaluate the feasibility of conducting such a survey at the site, place remains discovered in excavation units into a broader context and guide placement of new trenches. We chose magnetometry because this method can quickly and inexpensively cover large areas and provide a good frame for additional remote sensing techniques such as resistivity. After collecting some initial sample data, we determined that the most efficient method for our purposes was to conduct our survey in 20 x 20 meter grids,

[18] The author would like to thank Drs. Geoff and Françoise Summers and the 2003 Kerkenes spring season team for training him in remote sensing, and for permitting him to use the Kerkenes lab at ODTU to reprocess the Kenan Tepe data with the latest software; Nurdan Çayırezmez for assistance in processing the data; Dr. Tim Matney and Ann Donkin for advice on data collection and processing methodologies and Dr. Roger Walker for advice on equipment maintenance. Of course, the author is singly responsible for the data collected, processed and presented here.

[19] We thank Hugh Elton and the staff of the British Institute of Archaeology at Ankara for generously loaning us their Fluxgate gradiometer.

collect eight samples per square meter, and walk in a zigzag pattern with 1-meter wide spacing between traverses.[20] In this first season of work, we collected data from three parts of the site: the northeastern part of the lower village (Area F [figure 2]), the summit of the tell (Areas A and B [figure 2]) and western slopes of the tell (Area C [figure 2]). Excluding grids repeated for test purposes, in total we collected 44 complete or partial grids, equivalent to approximately 1.76 hectares (figure 26).

Expectations

Magnetometry results are determined by the characteristics of the buried cultural remains, the soil, local geological conditions, data collection methodology, equipment, and data processing tools. For example, good results may be expected when stone architecture is close to the surface and its characteristics contrast with soil and geological conditions, or extensive burning magnetizes features (e.g., negative reading limestone walls contrasted with positive reading iron-rich soils, or high positive reading kilns; see for example the results from Titriş Höyük [Matney and Algaze 1995:36-37], Ziyaret Tepe [Matney and Rainville 2005:40-42, 65], Kerkenes [Summers and Summers 1998] and Al Rawda [Gondet and Castel 2004]). Yet, underlying geology, such as bedrock; site formation processes, such as burning; and modern features, including iron survey datums and irrigation pipes, also impact the data.[21] These factors must be considered when planning a remote sensing survey and interpreting the results.

In the lower village north and east of the tell (Areas F and G), excavations uncovered cobblestone surfaces, cobblestone features, small (ca. 1 meter diameter) clay ovens, simple pit burials, and thin mud brick walls without stone foundations within the first meter below the ground surface (Parker *et al.* 2003a). Given these characteristics, we did not expect to see unambiguous, clear results in the data from this area (i.e. complete architectural plans). Instead, we hoped to identify areas of intense burning, such as kilns or burned structures, or more substantial architecture than found in the excavations. In contrast, a sounding on the western slope of the tell, trench C5, revealed a large (at least 1 meter wide) mud brick wall just beneath the ground surface with deep foundations (Parker and Dodd 2005). From the small exposure, it was unclear if the wall was part of a building, or perhaps a retaining or defensive wall. We were optimistic that the wall's width and proximity to the ground surface would make it possible to trace this feature's extent with the magnetometry data. On the summit of the tell we expected mixed results. Here, trenches revealed fieldstone and mud brick features close to the surface, but they were cut by burials and some features graded into earlier remains due to erosion and rebuilding. Such tight layering and cutting of remains may make it difficult to trace architecture and features. Also, in several seasons of work on the tell, we traversed the

[20] For data collection we used a GeoScan FM-36 fluxgate gradiometer with "a nominal sensitivity of 0.1 nT at 10 samples/second" (Somers in Algaze et al. 1995:22-23). We processed and filtered all data with Geoplot 2.01 and 3.0 software.

[21] See for example the conditions and results at Ziyaret Tepe (Matney et al. 2003:198-200, 219-220) and at Kerkenes (http://www.metu.edu.tr/home/wwwkerk/kerk1/05remote/geophyss/index.html).

summit hundreds of times with wheelbarrows and vehicles and we stored our tools in this area. So much traffic no doubt deposited a fair amount of small nails or other metal pieces lost from tools. This metal debris, invisible but pressed into the surface of the site, may affect the clarity of the data in this area.

Collection conditions and geomorphology

During data collection, the weather was hot and dry.[22] Ground cover included sparse to thick dry grass, and prickly caper-bearing scrub brush.[23] Several soundings excavated between the 2000 and 2004 seasons, combined with eroded sections in the drainages to the north, east and south of the lower town, provide a profile of the geomorphology of Kenan Tepe. The archaeological deposits on the tell and the lower town overlay reddish brown clay with white, pebble-sized calcium carbonate inclusions[24] and layers of conglomerate deposited by ancient floods and shifts in the bed of the Tigris River.[25] The cultural deposits are between 3 and 4.5 meters thick between the tell and the eastern edge of the lower town, where the site is truncated by the Tigris, and at least twice as thick on the tell itself. Cultural deposits are thinner towards the northwestern part of the lower town, and in this area the sterile clay layers are missing. Here, archaeological remains lie directly on top of conglomerate.[26] In an exceptional case, cultural material in sounding G4 (figure 2) ended at fine greenish sand, perhaps marking the course of an ancient drainage. On the southern side of the tell (in Area I [figure 2]), soundings revealed over 4 meters of cultural material dating to the second millennium B.C. and later. We suspect that this material is accumulated erosion from the main mound but we cannot rule out the possibility that intact features exist in this area.

Results

Many potential features are visible in the data. In this report we focus on the features that are the most obvious and perhaps most significant. Additional processing using different filters and applications may reveal additional features.

Lower town

The most prominent features in the data from the lower town are the two long, dark (positive magnetic signal) linear features (figures 26 and 27). One begins in grid

[22] Data collection began by 6 am and continued until noon, sometimes continuing in the late afternoon. Fluctuations in the temperature over the course of the day required balancing the machine at least twice in the morning and again in the afternoon.

[23] We cleared the ground cover when it significantly interfered with our traverses but we did not completely scour the surface of all vegetation.

[24] Perhaps calcic xerosol? See Wilkinson 2004:29.

[25] Thanks to Professor Donald Sullivan for advice on the interpretation of Kenan Tepe geomorphology. For a summary of the sections and soundings, see Parker *et al.* 2003a:120-121.

[26] To determine the effect the conglomerate layers might have upon the magnetic signals in the lower town, we held the balanced gradiometer in proper orientation next to exposed conglomerate sections in the northern drainage. This test produced no notable readings; if anything, the readings taken on conglomerate were consistently negative (low magnetic signal).

block n630, e595 and continues southeast into block n590, e675.[27] The other one begins in n630, e675 and runs northeast to n690, e715. Modern plow scars appear as a loop and a zigzag which cross the second feature two times.[28] For the features themselves, there is no evidence of any modern disturbance or activity that could be responsible for their creation. A third linear feature appears to articulate with the first feature in block n650, e575, continue southeast to block n630, e635, with another linear feature branching north in the southeast corner of block n650, e615.

The most obvious interpretation for these linear features is that they are paths or streets whose black, positive reading derives from a paving of potsherds and/or the concentration of accumulated garbage consisting of pottery, ash and organic material. Alternatively, these features may derive from geological or geomorphological conditions. The latter interpretation for the first linear feature is strengthened when the remote sensing data is laid over the topographic map and we see that this feature leads directly to a drainage or gulley (figures 26 and 27). Perhaps the signals of this feature emanate from garbage that accumulated in a developing drainage due to erosion of the main mound and the lower town. Notably, excavation of trench F6 (figure 2) and inspection of the eastern slopes of Area H indicate that the gulley formed after the Late Chalcolithic settlement began in this area.

The data from Area F also reveal an intriguing square feature whose center point is located just northeast of the intersection at block n690, e735 (figures 26 and 27). This feature is oriented northeast to southwest, and measures roughly 20 meters on a side. It appears as a faint, white, negative signal and is characteristic of a thin feature made from low metallic stones like limestone. If the second linear feature is a path or street, then it leads right up to the western side of the square feature. Notably, the interior of the square feature is relatively quiet in terms of its signals. Its interior is mostly gray in the data, having a relatively neutral metallic charge when compared with the many dark black and light white readings that give a mottled appearance throughout the lower town. Another quiet space is located in the transition from grids n630, e655 to n650, e655. Plow scars obscure the eastern side of this quiet area, while its southern border is a dark linear feature and its western edge is a diagonal light linear feature. Perhaps this quiet spot is the location of another large square feature like that in the northeastern part of Area F.

Western slope of the tell

A strong bipolar (positive and negative) reading linear feature shows up in the data on the western slopes of the tell (figures 26 and 27). This feature begins in the northwest corner of grid n590, e495 and continues southwest across grid n590, e475 before disappearing into test trench C5. The feature is bisected east–west by two thin white lines that derive from the modern dirt road on the site. We know from trench C5

[27] For clarity and convenience, here we list only the last three digits of the actual coordinates, which run to six or seven digits (e.g. n4188565.691, e659570.83). Grid blocks are referred to by the coordinates of their southwest corner.

[28] Kenan Tepe is *not* used for farming and is not regularly plowed, but apparently some time in the not too distant past someone drove a plow in an irregular, wide loop across this area.

that this feature is a brick wall at least 1 meter wide preserved just below the ground surface. Curiously, the eastern side of this wall is packed with relatively pure clay, likely dug from a river or stream bed that nonetheless contains a few artifacts and some naturally occurring iron accretions. It is not clear why this feature gives a bipolar reading, but the contrast between the mudbricks and the clay fill to the east is probably causing this effect. The wall does not appear to corner anywhere within the data suggesting that unless it belongs to a very large building, it must be a retaining, terrace or circuit wall.

Ground truthing

Targeted excavations over features appearing in the remote sensing data are useful for assessing initial interpretations, guiding revised interpretations and evaluating the data collection methodology. When digging ground truthing trenches it is advisable to excavate perpendicular to the signal and at least 1 or 2 meters beyond the width of the signal to ensure you are crossing the feature with the trench. During the 2004 season, UTARP team members excavated three ground truthing trenches including: trench F18, crossing the northern part of the square feature in area F; trench G8, crossing the winding linear feature at n650, e625; and trench C6, crossing the northern end of the northeast to southwest linear feature that corresponds to a wall found previously in trench C5 (figures 2, 26 and 27). In each case, the trenches uncovered a feature that corresponded precisely to the feature in the remote sensing data. With that said, excepting the wall on the western slope of the main mound, the trenches did not answer all questions about interpretations of the data.

Trench F18. This trench is 1 meter east-west by 4 meters north-south, with southwest corner coordinates n698, e734 (figure 2 and 26). We dug this trench across the square feature identified in this area (figure 27). We began a topsoil locus (L1) that continued until we reached a surface (L2) and loose, reddish fill with white lime bits (L3). The surface was very compacted, being comprised of small cobblestones, pebbles and large Early Bronze Age jar pieces. We also found a complete sheep/goat mandible on the surface. In contrast, the northern 3 meters of the trench contained loose, reddish-brown soil with white lime inclusions. Such soil is characteristic of the sterile clay at the site but in L3 its looseness and rich Early Bronze Age artifacts indicate that it is redeposited material. This soil is also used for mud bricks; thus L3 may be eroded mudbrick walls or fill from earth moving activities. Surface L2 was about 10-15 centimeters thick and overlaid compact earth with some pebbles (L4) but nothing like the concentration of debris seen in L2.

We found surface L2 in exactly the spot where the remote sensing data showed a linear anomaly, and its north to south width matches that of the signal, but it hardly qualifies as a wall. Perhaps the remote sensing data derives from something buried deeper than the approximately 50 centimeters we were able to reach in this trench. Alternatively, L2 was compacted enough to register on the machine. How then do we explain its linear aspect? Perhaps L2 is a path, the foundation for an unpreserved mudbrick wall, or a drip line alongside a building with mudbrick walls. Now that we have confirmed its existence

and exact location, understanding this signal will require a wider east to west exposure that can follow the signal over its long axis.

Trench G8. This 1 meter east-west by 6 meter north-south trench is located in the heart of Area G, just north of sounding G4 and trench G6/7 in grid block n630, e615 (figures 2 and 26). We dug this trench across the linear feature that passes through this grid block (figure 27). We removed topsoil (L1) and immediately uncovered a loosly packed cobblestone surface (L2) covering a space about 1 x 1 meter exactly where the linear magnetic anomaly appeared. Yet the surface was not very substantial and it is unclear if it really follows the east-west path seen in the magnetic data or if we simply found part of a small surface fragment. We found a burial in the northern end of the trench. We removed L2 and excavated up to a meter below the ground surface without encountering any other features that could have caused the linear signal in the remote sensing data. Time did not permit expansion of the trench to the east or west to investigate the continuation of L2. The artifacts from this trench date to the late fourth or early third millennium B.C.

Trench C6. Trench C6 is 1 meter north-south by 10 meters east-west, located on the northwestern side of the tell where it begins to slope up from the valley to the top of the tell in grid blocks n590, e475 and e495 (figures 2 and 26). We dug this trench across the linear anomaly traced in figure 27. After removing topsoil and some fill in the eastern end of the trench, we identified a mudbrick wall made from a mix of grey, reddish brown and greenish bricks just like those in the wall found to the south in trench C5 in 2002. The wall runs southwest-northeast and contains "damp courses" of reeds or brush, evidenced by whitish reed impressions. We found these reeds in the eastern and western parts of the wall as exposed, and the reeds and brick seams consistently run southwest-northeast, confirming that we have not reached the western edge of the wall. We did uncover a significant seam about 3 meters from the western baulk but it seems that the wall continues west past this seam, as evidenced by continued bricks and reeds in appropriate orientation (not jumbled like collapse). We never found a clear western edge for the wall, and if this is accurate, then the wall is at least 6.5 meters wide. Instead of a western edge, the bricks continue down the hill towards the base of the main mound.

The eastern edge of the wall is clearly delineated by a large deposit of relatively pure clay like that found east of the wall in trench C5. As with the C5 clay, L5 contains small amounts of Early Bronze Age or Late Chalcolithic pottery, some animal bones and lithics. Local residents say that clay such as that found in L5 only occurs in a few places in the area, although it may derive from the Tigris River bed. Regardless, this clay was brought to the site for a special purpose – presumably to level the area and shore up the wall. If the wall connects to the one in C5, as it appears, then it may be a fortification wall, a terrace wall to prevent erosion, or a retaining wall for a massive filling operation.

CONCLUSION

Taken together the 2003 study season and the 2004 excavation season were a great success for the Upper Tigris Archaeological Research Project (UTARP). Research during the 2003 study season is not only paving the way for final publications of these data but it is also aiding us in focusing our future research agenda. The biggest success of the 2004 field season is the fact that we addressed and can now answer the research questions that we set out to explore at the beginning of the season. Combined this leads us to the following results:

Question 1:

What is the extent of Ubaid and Late Chalcolithic settlements at Kenan Tepe? And more specifically, does Ubaid and Late Chalcolithic occupation continue under Kenan Tepe's main mound?

In our previous reports we have suggested that Ubaid occupation at Kenan Tepe was probably restricted to the eastern portion of the main mound but left open the possibility that settlement from this early period stretched under the high mound. We also noted that Ubaid ceramics were discovered in a small exploratory trench at the southwestern edge of Area F (in trench F6 [figure 2]). We further suggested that settlement during the Late Chalcolithic period expanded into the lower town, but again, we left open the possibility that Late Chalcolithic remains were also buried under Kenan Tepe's main mound. An examination of the material from our original Area I sounding (trench I1 [figure 2]) in 2003 and the excavation of trench I2 in 2004 strongly support the theory that Kenan Tepe's Ubaid and Late Chalcolithic settlements *do not* continue under the Kenan Tepe's main mound. We can now much more confidently say that the Ubaid period site at Kenan Tepe is probably less than one hectare in total size and is restricted to the eastern slopes of Kenan Tepe's high mound. These findings are not a surprise. They are consistent both with Algaze's original assumptions based on his 1988, 1989 and 1990 surveys of the Tigris basin (Algaze 1989; Algaze *et al.* 1991) and with other surveys and excavations slightly further a field in northern Iraq (Akkermans 1989; Jasim 1985; Wilkinson and Tucker 1995, for example), and north Syria (Meijer 1986, for example) where Ubaid sites are usually not more than 2-3 hectares. What is surprising is the amount of erosional debris that has accumulated in this and in other parts of the site. Since most of this debris appears to belong to the early second millennium, one can only speculate how much of the second millennium site has been lost to natural processes.

We can also say with some confidence that the total size of Kenan Tepe's Late Chalcolithic settlement was considerably less than the site maximum of 4.4 hectares. Although Late Chalcolithic remains have been discovered on the eastern slopes of the high mound and in the bottom of our step trench, the only concrete evidence of Late Chalcolithic remains on other parts of Kenan Tepe's high mound date to the end of that sequence during the LC 5 period (Parker and Dodd 2005). Although the site does spread into the lower town much earlier (in the LC 4 period, see above) there is, as of yet, no evidence for LC 4 occupation on the western and southern portions of Kenan Tepe's main

mound. Although the nature of settlement between our Area F trenches and the main mound has yet to be fully explored, we suggest that occupation during the LC 4 period was concentrated between the eastern slopes of the high mound and the eastern portion of the lower town, an area of approximately 3 hectares.

Question 2:

What is the chronology of the Ubaid and Late Chalcolithic settlements? Is occupation at Kenan Tepe restricted to specific phases of these periods or is there a sequence of development at the site?

We explored the chronology of the Ubaid occupation at Kenan Tepe through processing of the ceramics from various areas (in 2003) and through the excavation of trenches D5 and E2 (in 2004). We found that in trench D5 there is a considerable amount of debris, including disarticulated remains of earlier surfaces and walls below the level of the Late Ubaid house we call *Ubaid Structure 1*. In fact, the construction of *Ubaid Structure 1* is likely responsible for this situation. The ceramics from both trench D5 and E2 are markedly different from the Late Ubaid material that we recovered from *Ubaid Structure 1* and we believe that these data reflect the material of an earlier phase of the Ubaid culture at Kenan Tepe. Thus the data suggest that the Ubaid settlement at Kenan Tepe *is not* restricted to a single phase of the Late Ubaid period but rather that the development of this settlement took place over considerable time.

Research during the 2003 and 2004 seasons has also helped to clarify the chronology of Late Chalcolithic occupation at Kenan Tepe. Analysis of our previous data from trench F1 in 2003 combined with excavations in trench F1 in 2004 have given us a complete ceramic sequence and directly connected stratigraphy from the LC 4 through the LC 5/EB 1 transition. Thus far, our earliest carbon dates from Area F come from the oven/kiln feature excavated during the 2001 field season (Parker *et. al.* 2003a:115 and Parker, Creekmore and Dodd 2004:552-553; 574). Since this feature was founded on virgin soil and is almost certainly connected to domestic contexts excavated in trench F1 in 2004, we can confidently say that occupation in the eastern portion of Kenan Tepe's lower town began somewhere around 3500 B.C. Whether or not earlier Late Chalcolithic contexts still remain to be discovered on Kenan Tepe's main mound or in other portions of the lower town is a question that will have to be addressed in future field seasons. Our latest carbon date, which was taken from a pit in trench F7, dates to the late LC 5 (F.7.7094.28: 2 sigma calibrated 3360-3020 B.C.). These data suggest that approximately 2 meters of occupational debris accumulated in Area F during the LC 4 and LC 5 periods. They also show that the cobbled surfaces and work areas in the highest levels in Area F belong to the late LC 5 or early EB 1.

The nature of the chronology of the Ubaid and Late Chalcolithic periods at Kenan Tepe is also illuminated by the absence of data. Our research thus far does not show a direct connection between our Late Ubaid remains, which are carbon dated to ca. 4700-4620 B.C. (Parker and Dodd 2005:72), and our earliest Late Chalcolithic occupation, which appears to have begun some time around 3500 B.C. (see above and Parker *et al.* 2003a:114-115). These data suggest that the spread of the so-called Late Northern Ubaid

cultural complex and the establishment of the communities of the Late Chalcolithic are, at least at Kenan Tepe, separate phenomena.

Question 3:

What kind of data can we hope to obtain through remote sensing at Kenan Tepe?

The remote sensing results from the 2004 season met our expectations. A few tantalizing features attracted our attention for ground truthing. In each case we found features exactly where the data indicated an anomaly, but further exposures are necessary to clearly tie the features to the data. The long linear features and the square feature in Area F are curious entities that so far seem to correspond to pavements or cultural debris packed into earth, pebble and cobblestone surfaces. Clear evidence of architecture in the lower town is lacking in the data from this area. In contrast, the brick wall on the western slope of the main mound is clearly evident in the data, where we can follow its path for over 20 meters. As magnetometry indicates, and ground truthing confirms, this wall is unusually wide and seems to run along the entire western edge of the main mound. In sum, magnetometry provided a first look at a large part of Kenan Tepe. Future work with different methods, as well as additional processing and study of the 2004 season's results will improve our understanding of the settlement structure and facilitate targeted excavations.

References Cited

Akkermans, P.M.M.G. 1988a – The Period IV Pottery, in: Hammam Et-Turkman, vol. I. Edited by M. Van Loon. pp. 181-285. Leiden: Nederlands Instituut voor het Nabije Oosten.

Akkermans, P.M.M.G. 1988b – An Updated Chronology for the Northern Ubaid and Late Chalcolithic Periods in Syria: New Evidence from Tell Hammam et-Turkman. *Iraq* 50:109-146.

Algaze, G. 1989 – A New Frontier: First Results of the Tigris-Euphrates Archaeological Reconnaissance Project, 1988. *Journal of Near Eastern Studies* 48(4):241-281.

Algaze, G. (ed.) 1990 – Town and Country in Southeastern Anatolia Vol. II: The Stratigraphic Sequence at Korban Höyük. Chicago: Oriental Institute Press.

Algaze, G., R. Breuninger, C. Lightfoot, and M. Rosenberg. 1991 – The Tigris-Euphrates Archaeological Reconnaissance Project: A Preliminary Report of the 1989-1990 Seasons. *Anatolica* 17:175-240.

Algaze, G, P. Goldberg, D. Honça, T. Matney, A. Mısır, A. Rosen, D. Schlee, L. Somers. 1995 – Titriş Höyük, a Small EBA Urban Center in Southeastern Anatolia: The 1994 Season. *Anatolica* 21:13-64.

Arzt, J. 2001 – Excavations at Tell Ziyadeh, Syria: The Northern Ubaid Reconsidered. Ph.D. Dissertation. New Haven: Yale University.

Bernbeck, R., S. Costello, and N. Ünal. 2004 – Excavations at Yenice Yanı 2002, in: *25. Kazı Sonuçları Toplantısı*, pp. 117-126. Ankara: T.C. Kültür ve Turizm Bakanlığı Kültür Varlıkları ve Müzeler Genel Müdürlüğü.

Braidwood, R., and L. Braidwood. 1960 – Excavations in the Plain of Antioch. Chicago: Oriental Institute Press.

Brandt, R.W. 1978 – The Chalcolithic Pottery, in: Korucutepe: Final Report on the Excavations of the Universities of Chicago, California (Los Angeles) and Amsterdam in the Keban Reservoir, Eastern Anatolia 1968-1970, vol. 2. Edited by M. Van Loon, pp. 57-61. Amsterdam: North-Holland Publishing Company.

Cluzan, S., J. Moulierac, A. Bounni. Editors. 1993 – Syrie. Mémoire et civilisation. Paris: Flammarion.

Dodd, L.S., B.J. Parker, A. Creekmore, and E. Healey. 2005 – The Upper Tigris Archaeological Research Project (UTARP): Excavations at Kenan Tepe in 2003, in: *26. Kazı Sonuçları Toplantısı*, pp. 357-370. Ankara: Kültür ve Turizm Bakanlığı Dösim Basımevi.

Esin, U. 1983 – Zur Datierung der vorgeschichtlichen Schichten von Değirmentepe bei Malatya in der östlichen Türkei, in: Beiträge zur Altertumskunde Kleinasiens. Festschrift für Kurt Bittel. Edited by R. M. Boehmer and H. Hauptmann, pp. 175-190. Mainz am Rhein: Phillip von Zabern.

Esin, U. 1994 – The Functional Evidence of Seals and Sealings of Değirmentepe, in: Archives Before Writing. Edited by P. Ferioli, E. Fiandra, G. G. Fissore, and M. Frangipane, pp. 59-81. Torino: Scriptorium.

Frangipane, M. 2000 – The Late Chalcolithic/EB I Sequence at Arslantepe: Chronological and Cultural Remarks from a Frontier Site, in: Chronologies des pays du Caucase et de l'Euphrate aux IVe-IIIe millenaires. Edited by C. Marro and H. Hauptmann, pp. 439-471. Paris: Institut Français d'Etudes Anatoliennes d'Istanbul.

Fujii, H. 1981 – Preliminary Report of Excavations at Gubba and Songor. *Al-Rāfidān* 2:141-163.

Gürdil, B. 2005 – Architecture and Social Complexity in the Late Ubaid Period: A Study of the Built Environment of Değirmentepe in East Anatolia (Turkey). Ph.D. Dissertation. University of California, Los Angeles.

Gondet, S. and C. Castel. 2004 – Prospection Géophysique à Al-Rawda et Urbanisme en Syrie au Bronze Ancien. *Paléorient* 30(2):93-110.

Hammade, H. and Koike, Y. 1992 – Syrian Archaeological Expedition in the Tishreen Dam Basin Excavation at Tell al-'Abr, 1990 and 1991. *Damaszener Mitteilungen* 6:109-175.

Hammade, H. and Yamazaki, Y. 1995 – A Preliminary Report on the Excavation at Tell al-'Abr on the Upper Euphrates, 1992. *Akkadica* 93:4-10.

Hauptmann, H. 1976. Die Entwicklung der frühbronzezeitlichen Siedlung auf dem Norşuntepe in Ostanatolien. *ArchKorrbl*, 6(1):9-20.

Healey, E. 2000 – The Role of Obsidian in the Late Halaf. PhD thesis. University of Manchester, UK.

Hoh, M. 1981 – Die Keramik von Hassek Höyük. *Istanbuler Mitteilungen* 31:31-82.

Hoh, M. 1984 – Die Keramik von Hassek Höyük. *Istanbuler Mitteilungen* 34:66-91.

Huot, J.L., 1989 – 'Ubaidian Villages of Lower Mesopotamia: Permanence and Evolution from 'Ubaid 0 to 'Ubaid 4 as seen from Tell el 'Oueili, in: Upon this Foundation: The 'Ubaid Reconsidered. Edited by E.

F. Henrickson and I. Thuesen, pp. 19-42. Copenhagen: The Carsten Niebuhr Institute of Ancient Near Eastern Studies.

Jasim, S.A. 1985 – The 'Ubaid Period in Iraq: Recent Excavations in the Hamrin Region. B.A.R. International Series 267. Oxford: B.A.R.

Jasim, S.A. 1989 – Structure and Function in an 'Ubaid Village, in: Upon this Foundation: The 'Ubaid Reconsidered. Edited by E. F. Henrickson and I. Thuesen, pp. 78-90. Copenhagen: The Carsten Niebuhr Institute of Ancient Near Eastern Studies.

Leenders, R. 1989 – The Red Wash Ware Ceramic Assemblage in Syria: A Review, in: To the Euphrates and Beyond: Archaeological Studies in Honor of Maurits N. Van Loon. Edited by O. M. C. Haex, H. H. Curvers, and P. M. M. G. Akkermans, pp. 89-102. Rotterdam: A. A. Balkema.

Matney, T., and G. Algaze. 1995 – Urban Development at Mid-Late Early Bronze Age Titriş Höyük in Southeastern Anatolia. *Bulletin of the American Schools of Oriental Research* 299/300:33-52.

Matney, T., J. MacGinnis, H. McDonald, K. Nicoll, L. Rainville, M. Roaf, M.L. Smith and D. Stein 2003 – Archaeological Investigations at Ziyaret Tepe, 2002. *Anatolica* 29:175-221.

Matney, T. and L. Rainville. 2005 – Archaeological Investigations at Ziyaret Tepe 2003-2004. *Anatolica* 31:19-68.

Meijer, D.J.W. 1986 – A Survey in Northeastern Syria. Istanbul: Nederlands Historisch-Archaeologisch Instituut te Istanbul.

Moon, J. and Roaf, M. 1984 – The Pottery from Tell Madhur. *Sumer* 42:128-158.

Moore, A. 2002 – Pottery Kiln Sites at al-'Ubaid and Eridu. *Iraq* 64:69-78.

Nishiaki, Y. 1999 – Tell Kosak Shamali: Preliminary Report of the Excavations (1994-1997), in: The Archaeology of the Upper Syrian Euphrates; The Tishrin Dam Area: Proceedings of the International Symposium Held at Barcelona January 28-30, 1999. Edited by G. del Olmo Lete and J. L. Montero Fenollós, pp. 71-82. Barcelona: Editorial AUSA.

Oates, J. 1968 – Prehistoric Investigations Near Mandali. *Iraq* 30:1-20.

Oates, J. 1969 – Choga Mami 1967-68: A Preliminary Report. *Iraq* 31:115-152.

Oates, J. 1982 – Choga Mami, in: Fifty Years of Mesopotamian Discovery: The Work of the British School of Archaeology in Iraq, 1932-1982. Edited by J. Curtis, pp. 22-29. London: British School of Archaeology in Iraq.

Oates, J. 1983 – Ubaid Mesopotamia Reconsidered, in: The Hilly Flanks and Beyond: Essays on the Prehistory of Southwestern Asia Presented to Robert J. Braidwood, November, 15, 1982. Edited by T. C. Young, P. E. L. Smith, and P. Mortensen, pp. 251-281. Chicago: Oriental Institute.

Oates, J. 1987 – A Note on the 'Ubaid and Mitanni Pottery from Tell Brak. *Iraq* 49:193-198.

Ökse, T. 2004 – 2001 Rescue Excavations at Salat Tepe, in: Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2001. Edited by N. Tuna, J. Greenhalgh, and J. Velibeyoğlu, pp. 603-640. Ankara: Middle East Technical University.

Parker, B.J., A. Creekmore, E. Moseman, and R. Sasaki. 2002a – The Upper Tigris Archaeological Research Project (UTARP): Preliminary Report from the Year 2000 Excavations at Kenan Tepe, in: Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2000. Edited by N. Tuna and J. Velibeyoğlu, pp. 613-643. Ankara: Middle East Technical University.

Parker, B.J., A. Creekmore, L.S. Dodd, E. Moseman, M. Abraham, and J. Schnereger. 2002b – The Upper Tigris Archaeological Research Project (UTARP): Year 2000 Excavations at Kenan Tepe, in: *23. Kazı Sonuçları Toplantısı*, pp. 435-444. Ankara: Kültür Bakanlığı Milli Kütüphane Basımevi.

Parker, B.J., A. Creekmore, L.S. Dodd, R. Paine, C. Meegan, E. Moseman, M. Abraham, and P. Cobb. 2003a – The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2001 Field Season. *Anatolica* 29:103-174.

Parker, B.J., A. Creekmore, L.S. Dodd, R. Paine, and M. Abraham. 2003b – The Upper Tigris Archaeological Research Project (UTARP): An Overview of Archaeological Research Conducted at Kenan Tepe during the 2001 Field Season, in: *24. Kazı Sonuçları Toplantısı*, pp. 1-20. Ankara: T.C. Kültür Bakanlığı Anıtlar ve Müzeler Genel Müdürlüğü.

Parker, B.J., A. Creekmore, and L.S. Dodd. 2004 – The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Synthesis of the Cultural History of Kenan Tepe, in: Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2001. Edited by N. Tuna, J. Greenhalgh, and J. Velibeyoğlu, pp. 547-602. Ankara: Middle East Technical University.

Parker, B.J., and L.S. Dodd. 2003 – The Early Second Millennium Ceramic Assemblage from Kenan Tepe, Southeastern Turkey: A Preliminary Assessment. *Anatolian Studies* 53:33-69.

Parker, B.J., and L.S. Dodd. 2004 – The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2002 Excavations at Kenan Tepe, in: *25. Kazı Sonuçları Toplantısı*, pp. 471-482. Ankara: T.C. Kültür Bakanlığı Anitlar ve Müzeler Genel Müdürlüğü.

Parker, B.J., and L.S. Dodd. 2005 – The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2002 Field Season. *Anatolica* 31: 69-110.

Pearce, J. 2000. The Late Chalcolithic Sequence at Hacınebi Tepe, Turkey, in: Chronologies des pays du Caucase et de l'Euphrate aux IVe-IIIe millenaires. Edited by C. Marro and H. Hauptmann, pp. 115-143. Paris: Institut Francais d'Etudes Anatoliennes d'Istanbul.

Roaf, M. 1982 – The Hamrin Sites, in: Fifty Years of Mesopotamian Discovery: The Work of the British School of Archaeology in Iraq, 1932-1982. Edited by J. Curtis, pp. 40-47. London: British School of Archaeology in Iraq.

Roaf, M. 1989 – 'Ubaid Social Organization and Social Activities as seen from Tell Madhhur, in: Upon this Foundation: The 'Ubaid Reconsidered. Edited by E. Henrickson and I. Thuesen, pp. 91-146. Copenhagen: The Carsten Niebuhr Institute of Ancient Near Eastern Studies.

Rothman, M. 2001 – The Local and the Regional: An Introduction, in: Uruk Mesopotamia & its Neighbors: Cross-Cultural Interactions in the Era of State Formation. Edited by M. Rothman, pp. 3-26. Sante Fe: School of American Research Press.

Rothman, M. 2002 – Tepe Gawra: the Evolution of a Small Prehistoric Center in Northern Iraq, Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.

Rothman, M. and J. Blackman. 2003 – Late Fifth and Early Fourth Millennium Exchange Systems in Northern Mesopotamia: Chemical Characterization of Sprig and Impressed Wares. *Al-Rāfidān* 24:1-24.

Safar, F., M.A. Mustafa.1981 – Eridu. Baghdad: State Organization of Antiquities.

Schachner, A., and Ş. Schachner. 2003 – 2000-2001 Yılı Giricano Kazıları, in: *24. Kazı Sonucları Toplantısı 24*, pp. 447-460. Ankara: Kültür Bakanlığı Dösim Basımevi.

Schwartz, G. 1988 – Ceramic Chronology from Tell Leilan: Operation I. New Haven: Yale University Press.

Stein, G.J., R. Bernbeck, C. Coursey, A. McMahon, N.F. Miller, A. Misir, J. Nicola, H. Pittman, S. Pollock, and H. Wright 1996 – Uruk Colonial Expansion and Mesopotamian Communities: An Interim Report on the 1992-93 Excavations at Hacınebi, Turkey. *American Journal of Archaeology* 100:205-260.

Stronach, D. 1961 – Excavations at Ras al 'Amiya. *Iraq* 23:95-137.

Summers, G. 2000 – The Median Empire Reconsidered: A View from Kerkenes Dağ. *Anatolian Studies* 50:55-73.

Summers, G., and F. Summers. 1998 – The Kerkenes Dağ Project, in: Ancient Anatolia. Edited by R. Matthews, pp. 177-194. London: British Institute of Archaeology at Ankara.

Summers, G., F. Summers, N. Baturayoğlu, Ö. Harmansah, and E. McIntosh. 1996 – The Kerkenes Dağ Survey: An Interim Report. *Anatolian Studies* 46:201-234.

Tobler, A. 1950 – Excavations at Tepe Gawra 2, Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.

Valladas, H., Evin J. and Arnold M. 1996 – Datation par la méthode du charbon 14 des couches Obeid 0 et 1 de Tell el Oueili (Iraq), in: Oueili: Travaux de 1987 et 1989. Edited by in J. L. Huot, pp. 381-383. Paris: Editions Recherche sur les Civilisations.

Velibeyoğlu, J., A. Schachner, and Ş. Schachner. 2002 – Erste Ergebnisse Eines Surveys im Bohtan-Tal und in Cattepe (Tilli), in: Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2000. Edited by N. Tuna and J. Velibeyoğlu, pp. 783-857. Ankara: Middle East Technical University.

Wilkinson, T.J. 2004 – On the Margin of the Euphrates. Settlement and Land Use at Tell Es-Sweyhat and in the Upper Lake Assad Area, Syria. Chicago: Oriental Institute Publications 124.

Wilkinson, T.J., and D.J. Tucker. 1995 – Settlement Development in the North Jazira, Iraq: A Study of the Archaeological Landscape. London: British School of Archaeology in Iraq.

Wright, H.T., and E.S.A. Rupley. 2001 – Calibrated Radiocarbon Age Determinations of Uruk-Related Assemblages, in: Uruk Mesopotamia & its Neighbors: Cross-Cultural Interactions in the Era of State Formation. Edited by M. S. Rothman, pp. 85-122. Santa Fe: School of American Research Press.

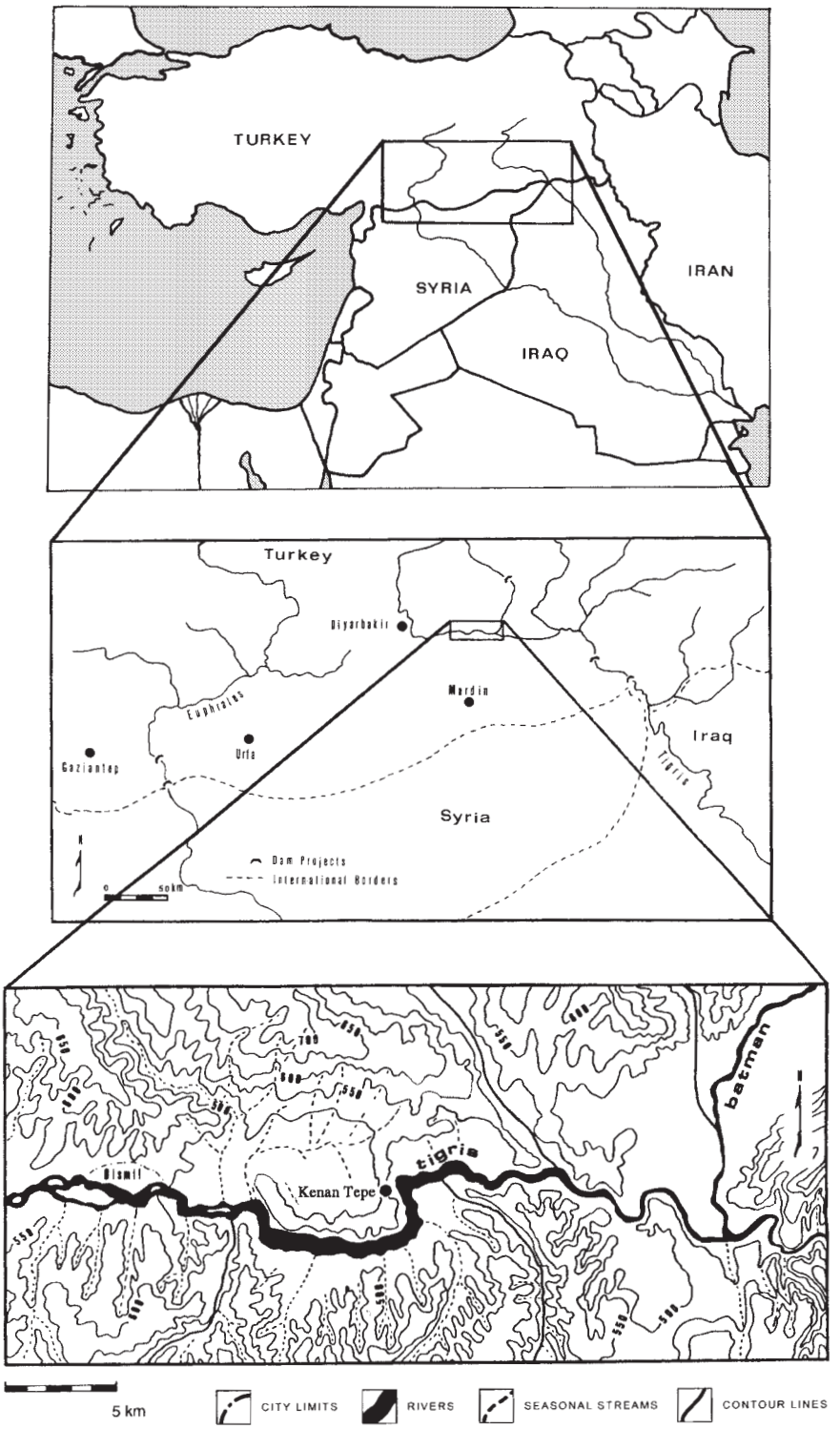


Fig. 1. Maps showing the location of Kenan Tepe in the Upper Tigris River region of southeastern Turkey.

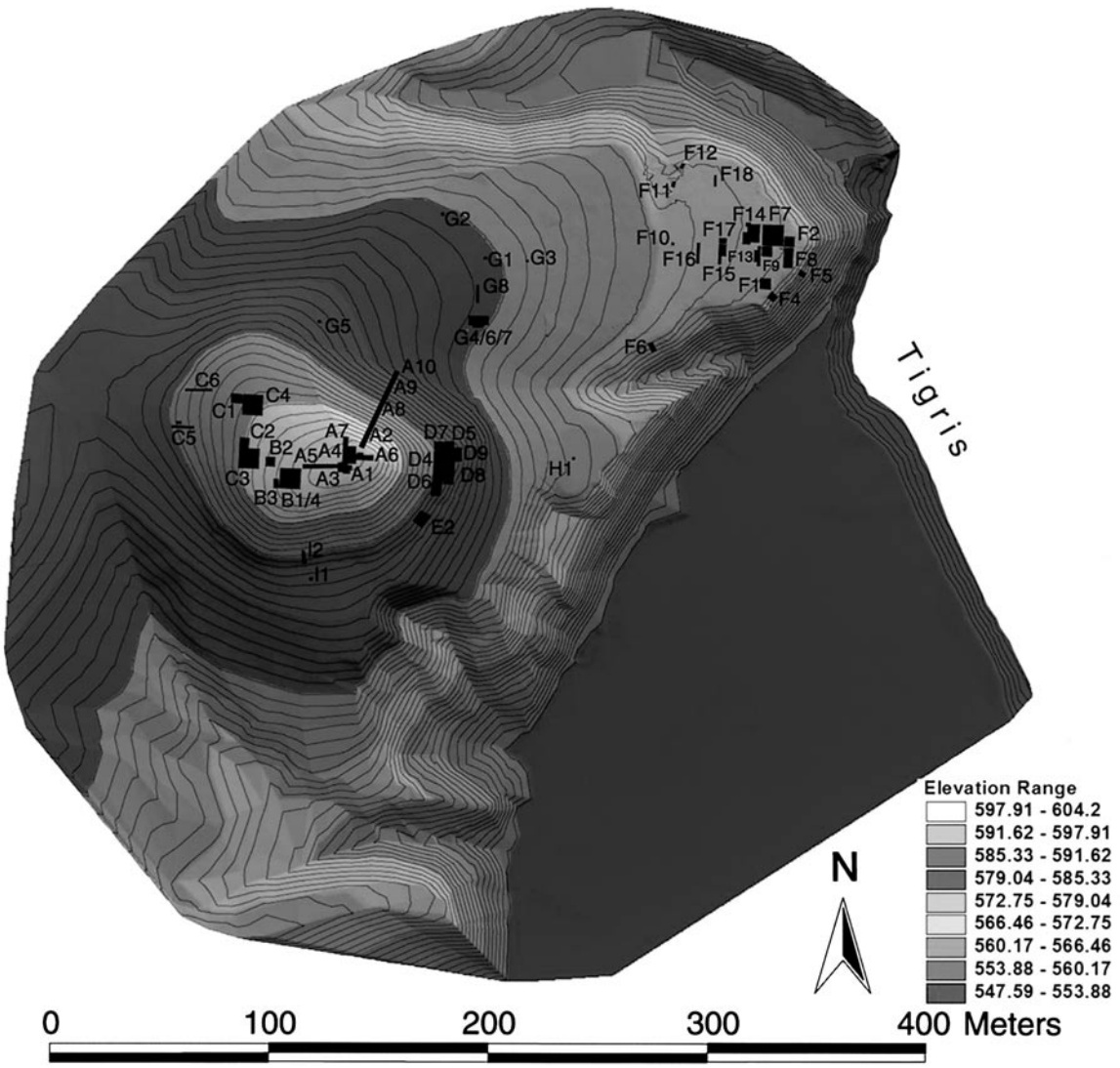


Fig. 2. Topographic map of Kenan Tepe and the surrounding landscape showing the location of excavations areas and trenches.

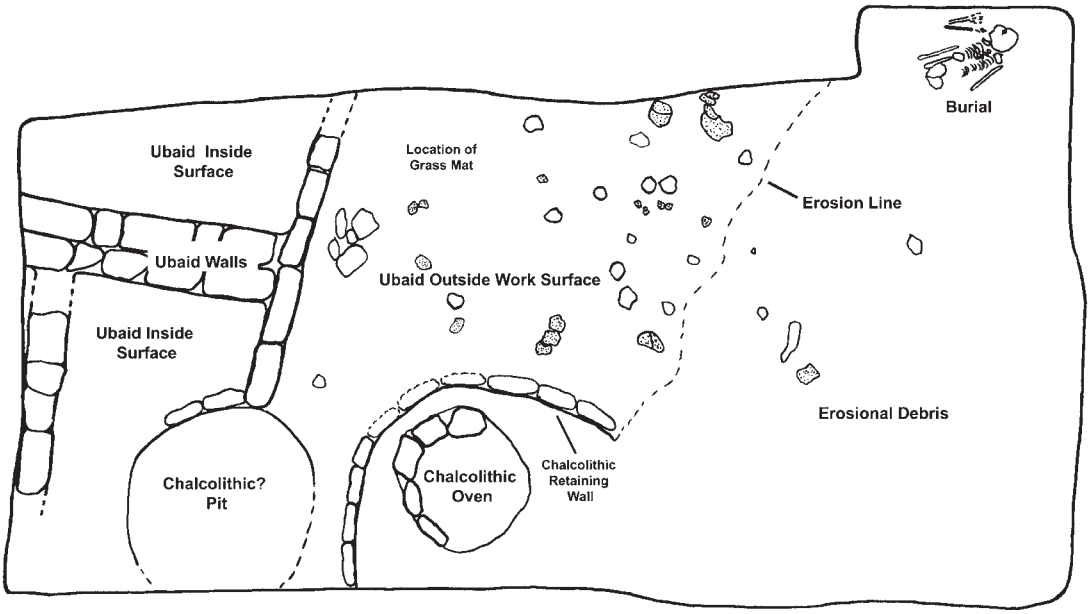


Fig. 3. Plan of trench D5 showing *Ubaid Structure 1* (in the far left portion of the trench) and surrounding contexts.

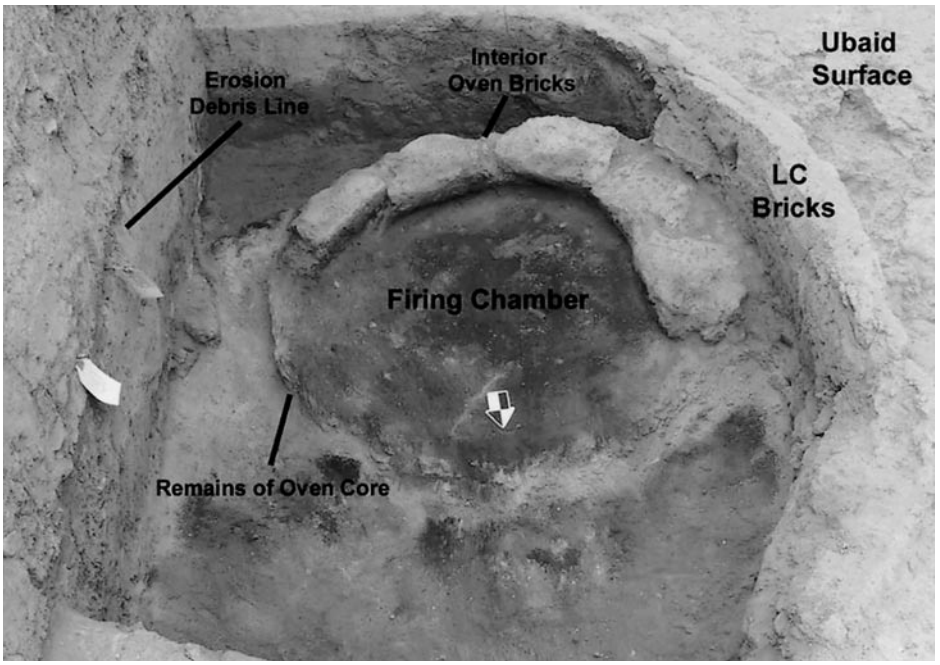


Fig. 4. Photo of Late Chalcolithic oven from trench D 5.

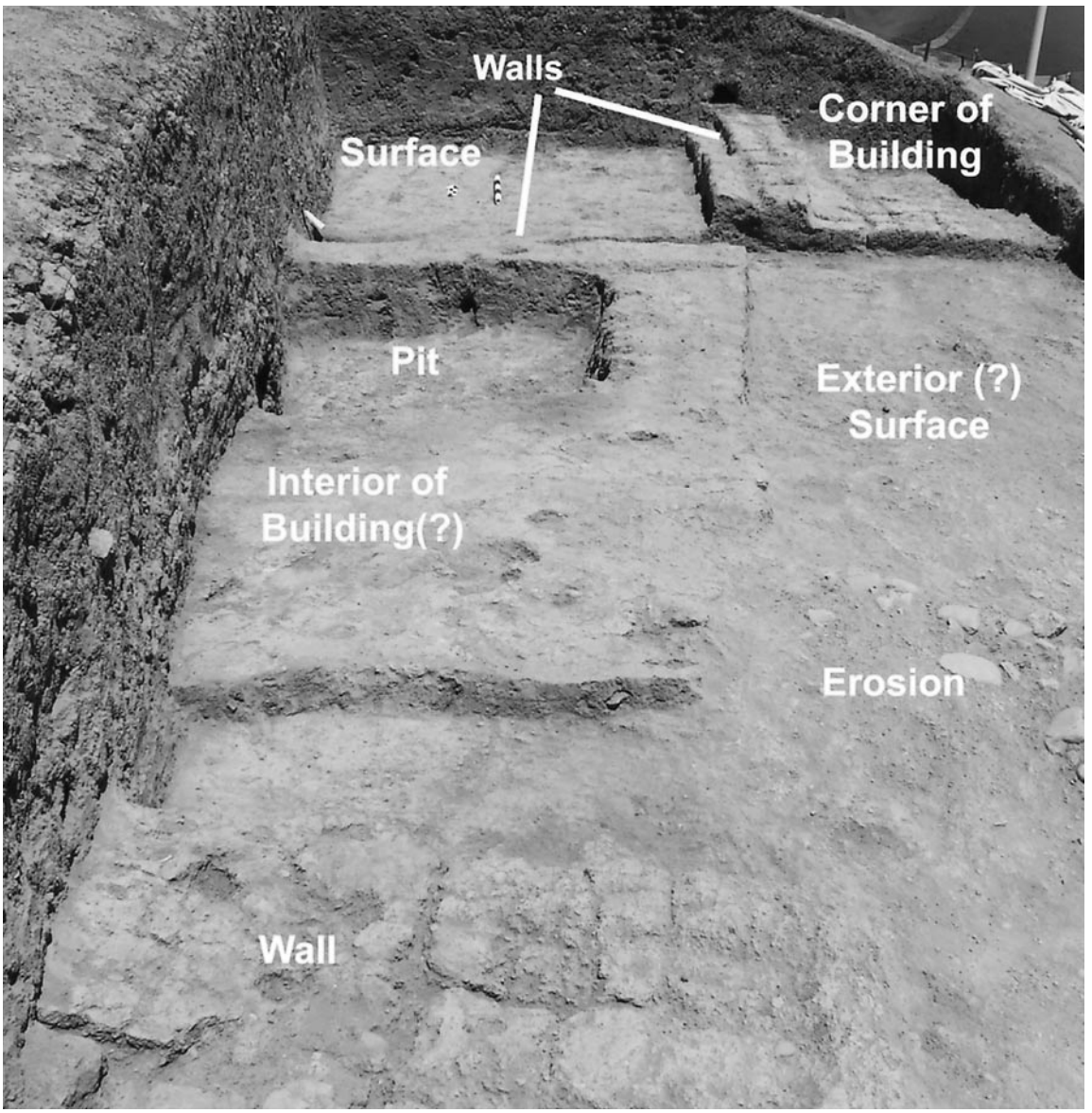


Fig. 5. View of trench D8 showing second millennium contexts.

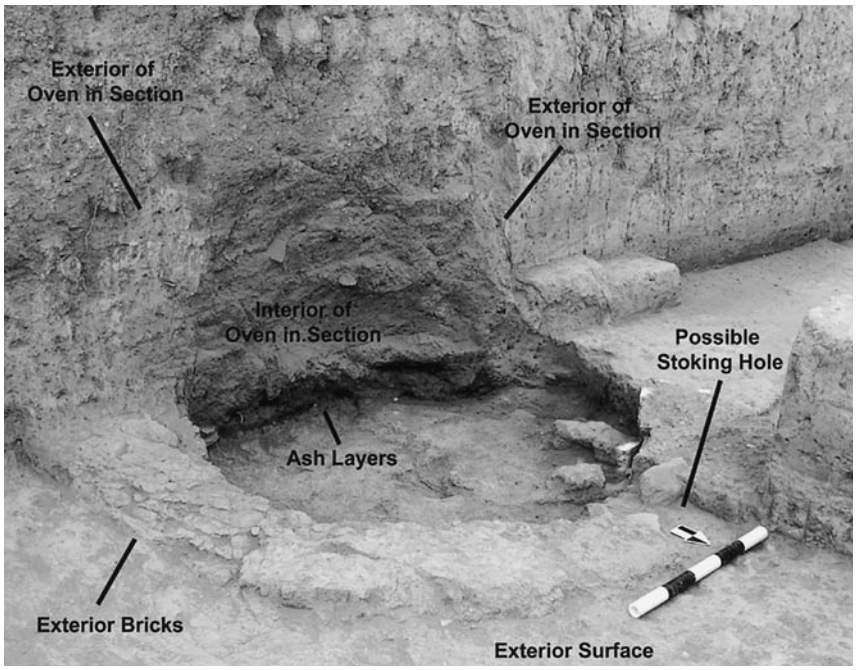


Fig. 6. View of Late Chalcolithic oven in trench D 9.

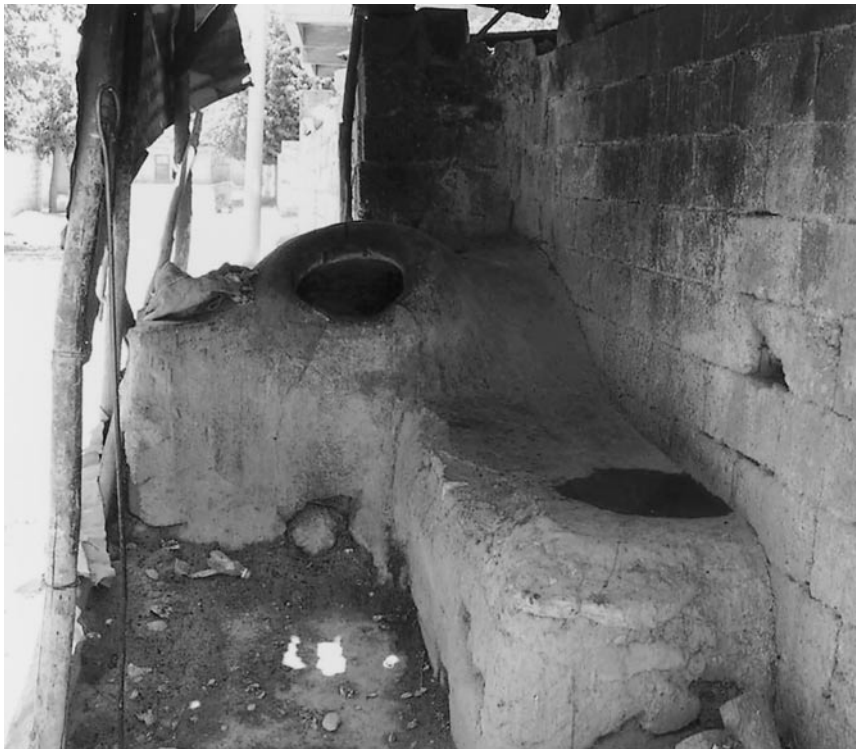
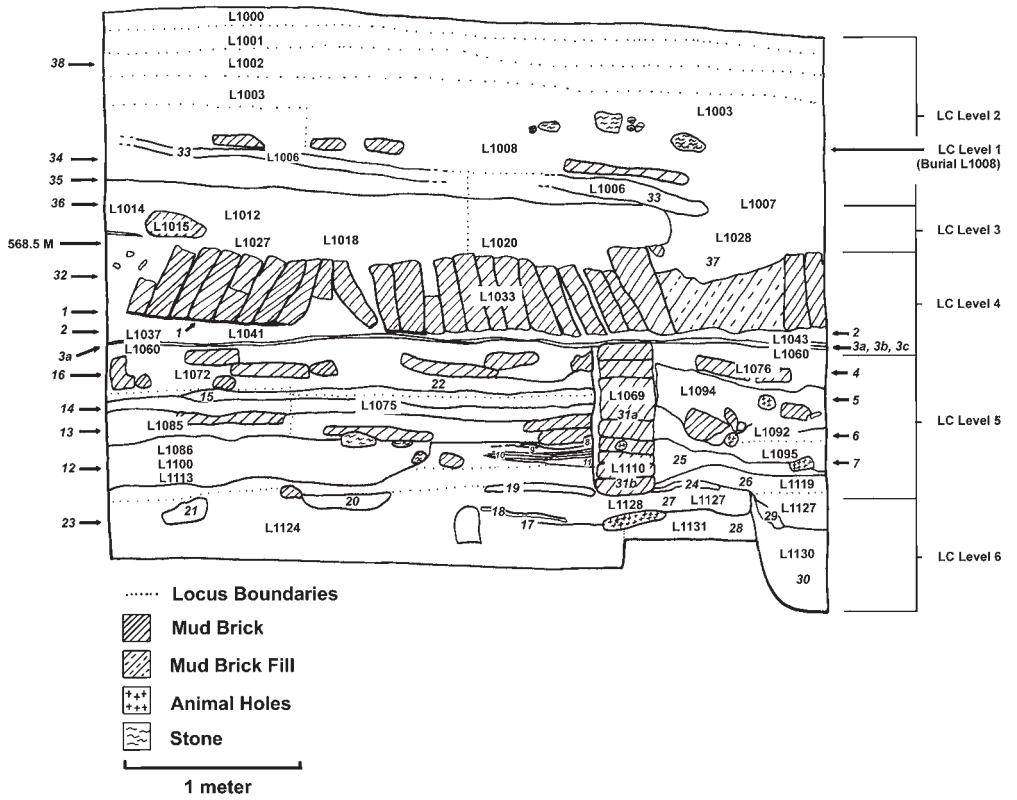


Fig. 7. View of modern oven.



1. Underside of bricks with heavy burning.
   a. Floor (10YR 6/4: light reddish brown)
   b. Ash layer (10YR 3/1: very dark gray)
2. Supra-floor fill (10YR 7/2: light gray)
3. Three superimposed layers
   a. Ash layer (2.5YR 5/1: black)
   b. Red layer (7.5YR 4/4: brown)
   c. White layer (7.5YR 8/1: white)
4. Fill with mud bricks
   a. Fill (5YR 7/2: pinkish gray)
   b. Bricks (7.5YR 6/4: light brown)
5. Ash with mud bricks (2.5YR 5/1: reddish gray)
6. Fill (10YR 6/2: light brownish gray)
7. Mud brick (10YR 7/3: very pale brown)
8. Stratigraphic layer (7.5YR 6/4: light brown)
9. Stratigraphic layer (5YR 4/6:yellowish red)
10. Series of thin stratigraphic layers
11. Stratigraphic layer (7.5YR 6/4:light brown)
12. Cobbles
13. Fill (7.5YR 7/1: light gray)
14. Mud brick (7.5YR 6/4: light brown)
15. Stratigraphic layer (7.5YR 7/2: pinkish gray)
16. Fill (7.5YR 7/2 pinkish gray)
17. Ash layer (2.5YR 5/1: reddish gray)
18 Stratigraphic layer (5YR 6/4 :yellowish red)
19. Stratigraphic layer (7.5YR 4/4 brown)
20. Ashy pit (7.5YR 7/1:light reddish brown)
21. Incusion (5YR 5/3: reddish brown)
22. Stratigraphic layer (7.5YR 5/3: brown)
23. Layered fill
24. Stratigraphic layer (7.5YR 4/4: brown)
25. Fill (10YR 7/3: very pale brown)
26. Ash
27. Fill (7.5YR 4/2: brown)
28. Fill (7.5YR 4/3: brown)
29. Fill
30. Pit with subdivisions of
    a. ash (Glay 1 4/n: dark gray)
    b. fine clay (7.5YR 6/4:dark brown)
31. Mud brick wall
    a. brick (7.5YR 6/4: light brown)
    b. brick (10YR 6/4: light brown)
32. Brick collapse (reddish and whitish bricks)
33. Cobble surface (L1006)
34. Fill
35. Cobble layer (L1009)
36. Mud brick debris
37. Mixed fill
38. Topsoil

Fig. 8. Trench F 1 east section.

Figure 9 descriptions

A. F1 L1130 KT8 #2: Reddish yellow exterior and interior surface (7.5YR 6/6). Strong brown fabric: (7.5YR 5/6). Abrupt transition to very dark grayish brown core (2.5YR 3/2). Large grit and large to medium chaff temper. Large chaff marks on exterior surface.

B. F1 L1115 KT1 #1: Brown exterior surface (7.5YR 4/3). Pale brown interior surface (10YR 6/3). Very dark gray fabric (7.5YR 3/1). Medium micaceous sand temper. Vertically burnished on exterior surface.

C. F1 L1116 KT7 #7: Yellowish brown exterior surface (10YR 4/5). Brown interior surface (10YR 5/3). Light brownish gray fabric (10YR 6/2) grading to grayish brown core (10YR 5/2). Large to medium grit temper. Horizontally burnished on exterior surface. Diameter uncertain.

D. F1 L1113 KT3 #1: Yellowish red exterior surface (5YR 5/6). Brown interior surface (7.5YR 5/3).Very dark gray fabric (2.5YR 3/1). Very fine micaceous grit temper with fine chaff. Diameter uncertain.

E. F1 L1116 KT7 #3: Brownish yellow exterior and interior surface (10YR 6/6). Strong brown fabric (7.5YR 5/6). Abrupt transition to greenish gray core (5/1 5G). Fine calcareous grit temper. Vertically burnished on exterior surface.

F. F1 L1130 KT8 #4: Light brown exterior surface (7.5YR 6/4). Reddish yellow interior surface (7.5YR 6/6). Reddish brown fabric (7.5YR 7/6). Fine grit temper.

G. F1 L1117 KT7 #1: Reddish yellow exterior surface (5YR 6/6). Reddish yellow interior surface and fabric (5YR 6/8). Abrupt transition to greenish black core (10Y 2.5/1). Large to fine grit and fine chaff temper. Horizontally burnished on interior surface.

H. F1 L1117 KT7 #2: Pink exterior surface (7.5YR 7/4). Light red interior surface (2.5YR 6/6). Yellowish red fabric (5YR 5/8). Very fine grit and chaff temper. Wash on exterior surface.

I. F1 L1116 KT2 #1: Reddish yellow exterior and interior surfaces (7.5YR 7/6). Strong brown fabric (7.5YR 5/8). Abruptly transition to dark grey core (10YR 4/1). Fine grit temper.

J. F1 L1116 KT7 #2: Reddish yellow exterior surface (7.5YR 7/6). Pink interior surface (7.5YR 7/4). Yellowish red fabric (5YR 5/8). Abrupt transition to reddish yellow core (7.5YR 6/6). Fine grit and medium chaff temper.

K. F1 L1116 KT7 #1: Reddish yellow exterior and interior surfaces and fabric (7.5YR 6/6). Abrupt transition to dark grey core (7.5YR 4/1). Medium micaceous grit and low levels of fine chaff temper.

L. F1 L1130 KT8 #5: Reddish yellow exterior and interior surface (7.5YR 6/6). Red fabric (2.5YR 5/8). Very fine grit temper.

M. F1 L1113 KT1 #2: Very pale brown exterior and interior surfaces (10YR 7/3). Reddish yellow fabric (5YR 6/6). Very fine micaceous grit temper.

N. F1 L1117 KT7 #9: Reddish yellow exterior surface and fabric (7.5YR 7/6). Light reddish brown interior surface (10YR 6/4). Abrupt transition to brown core (7.5YR 5/3). Very fine chaff temper.

O. F1 L1113 KT3 #2: Light brown exterior and interior surfaces (7.5YR 6/4). Strong brown fabric (7.5 5/6). Small amounts of very fine grit temper.

P. F1 L1113 KT1 #1: Light yellowish brown exterior and interior surfaces (10YR 6/4). Brown fabric (10YR 4/3). Very fine grit temper.

Q. F1 L1130 KT8 #3: Very pale brown exterior surface (10YR 8/4). Reddish yellow interior surface (5YR 7/8). Brownish yellow fabric (10YR 6/6) grading to reddish yellow core (5YR 6/8). Fine grit and chaff temper. Medium chaff marks and wash on exterior surface.

R. F1 L1116 KT7 #8: Black exterior surface (2.5YR 3/2). Very dark grayish brown interior surface (2.5YR 2.5/1). Very dark grayish brown fabric (2.5 YR 3/2) grading to black core (2.5 YR 2.5/1). Fine grit temper. Horizontally burnished on exterior surface.

S. F1 L1116 KT7 #6: Pale brown exterior surface (10YR 6/3). Light reddish brown interior surface (5YR 6/4). Reddish yellow fabric (7.5YR 6/6) grading to yellowish brown core (10YR 5/4). Medium grit temper.

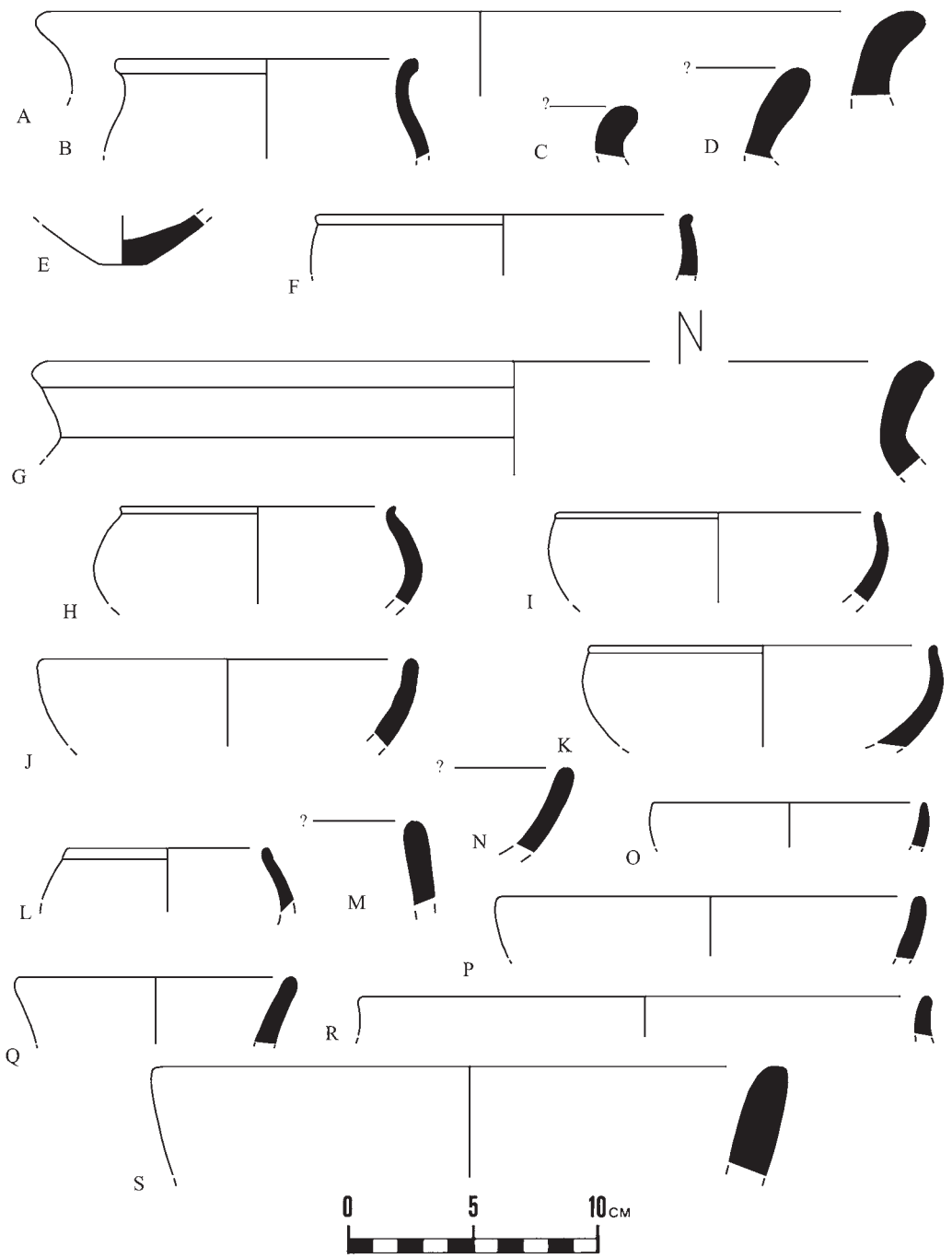


Fig. 9. Late Chalcolithic ceramics.

Figure 10 descriptions

A. F1.1117.7.3: Light brown exterior and interior surface (7.5YR 6/4). Reddish yellow fabric (7.5YR 6/6). Abrupt transition to grey core (10YR 5/1). Fine grit and very fine chaff temper.

B. F1.1117.7.4: Light brown exterior surface (7.5YR 6/4). Yellowish red interior surface (5YR 5/6). Red fabric (2.5YR 5/6). Abrupt transition to brown core (7.5YR 5/4). Fine grit and medium to large chaff temper. Wash and chaff impressions on the exterior surface.

C. F1.1117.7.5: Very pale brown exterior surface (10YR 7/3). Pink interior surface (7.5YR 8/4). Light brown fabric (7.5YR 6/4) grading to reddish brown core (7.5YR 7/6). Very fine chaff temper. Wash on exterior surface.

D. F1.1116.7.9: Yellowish brown exterior surface (10YR 5/4). Brown interior surface (7.5YR 5/4). Strong brown fabric (7.5YR 5/6). Abrupt transition to brown core (7.5YR 4/3). Fine chaff and grit temper.

E. F1.1117.7.6: Reddish yellow exterior surface (5YR 6/6). Light red interior surface (2.5YR 7/6). Strong brown fabric (7.5YR 5/6). Abrupt transition to dark grey core (7.5YR 4/1). Very fine grit temper with low levels of fine chaff.

F. F1.1116.7.10: Reddish yellow exterior surface (7.5YR 7/6). Reddish yellow interior surface and fabric (7.5YR 6/6) grading to reddish yellow core (5YR 6/8). Medium grit and low levels of fine chaff. Scattered chaff marks on exterior and interior surfaces.

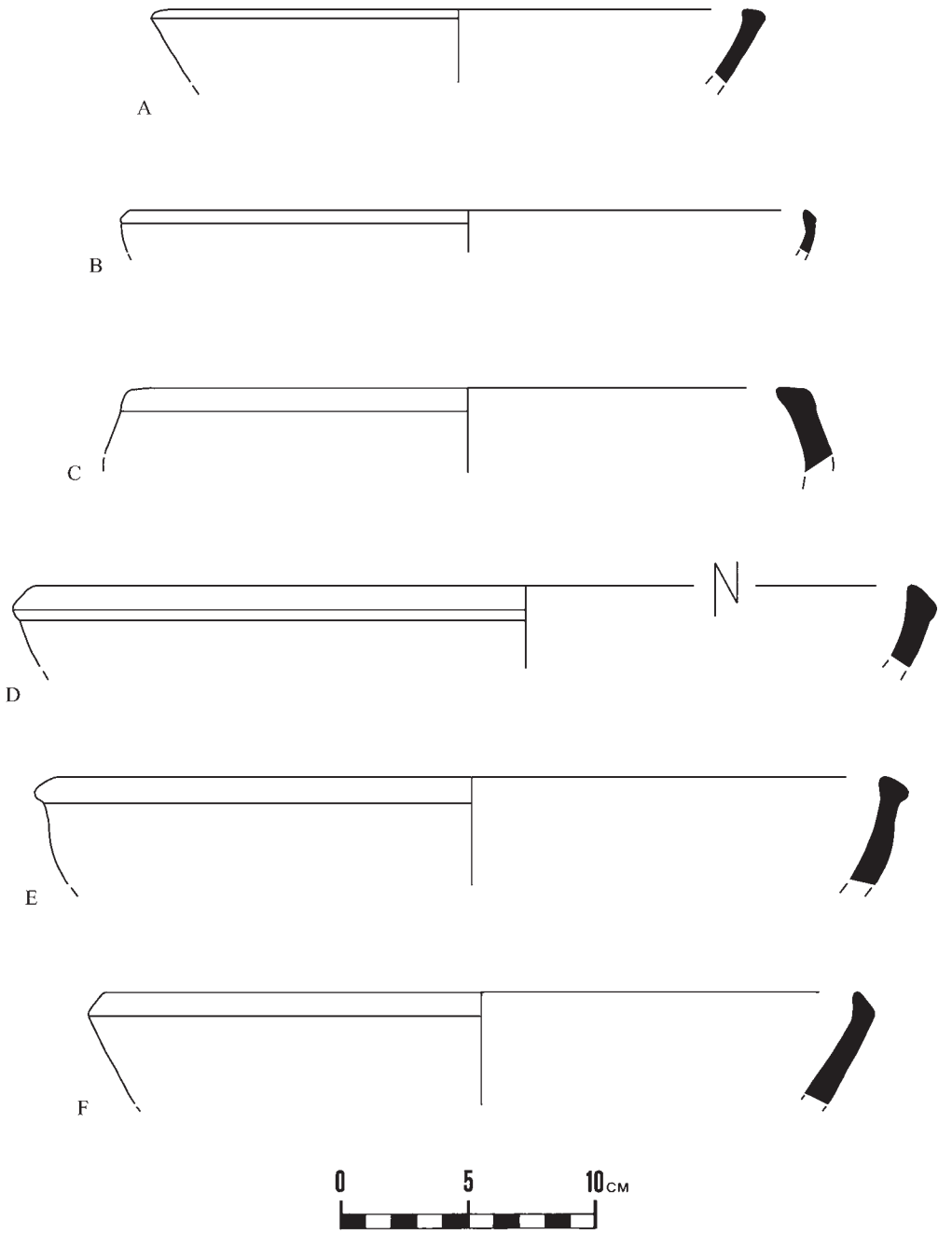


Fig. 10. Late Chalcolithic ceramics.

Figure 11 descriptions

A. D9 L20 KT7 #7: Reddish yellow exterior surface (7.5YR 6/6). Pink interior surface (7.5YR 7/4). Reddish yellow fabric (7.5YR 7/6) grading to light reddish brown core (5YR 6/4). Medium grit and fine chaff temper.

B. D9 L20 KT7 #4: Very dark gray exterior surface (7.5YR 3/1). Dark brown interior surface (7.5YR 3/2). Reddish yellow fabric (7.5YR 6/6). Fine grit and medium chaff temper. Diameter uncertain.

C. D9 L20 KT7 #6: Light brown exterior surface (7.5YR 6/4). Reddish yellow interior surface (5YR 6/6). Strong brown fabric (7.5YR 5/6). Very fine grit temper.

D. D9 L20 KT5 #1: Yellowish red exterior surface (5YR 5/6). Yellowish red interior surface and fabric (7.5YR 6/6). Fine sand and chaff temper.

E. D9 L8 KT16 #3: Brown exterior surface (7.5YR 4/2). Dark brown interior surface (7.5YR 3/2). Brown fabric (7.5YR 4/3) grading to dark grayish brown core (2.5YR 4/2). Large to medium grit temper. Medium chaff is densely marked on the exterior surface and in fabric. Exterior wash.

F. D9 L8 KT19 #1: Light reddish brown exterior and interior surface (2.5YR 6/3). Light reddish brown fabric (5YR 6/4). Very fine grit temper. String cut base and heavy wheel striations.

G. D9 L8 KT16 #1: Pale yellow exterior surface (2.5YR 7/3). Pale yellow interior surface (2.5YR 8/4). Light olive brown fabric (2.5YR 5/3). Large to fine grit and fine chaff temper.

H. D9 L8 KT16 #2: Pale yellow exterior and interior surfaces (2.5YR 8/3). Pale yellow fabric (2.5YR 7/3). Fine grit and medium chaff temper. Medium chaff impressions on exterior surface.

I. D9 L8 KT7 #4: Brown exterior surface (7.5YR 5/3). Brown interior surface (7.5YR 4/2). Brown fabric (7.5YR 5/4). Abrupt transition to brown core (10YR 5/3). Medium grit temper with few fine micaceous inclusions. Small amounts of fine chaff temper.

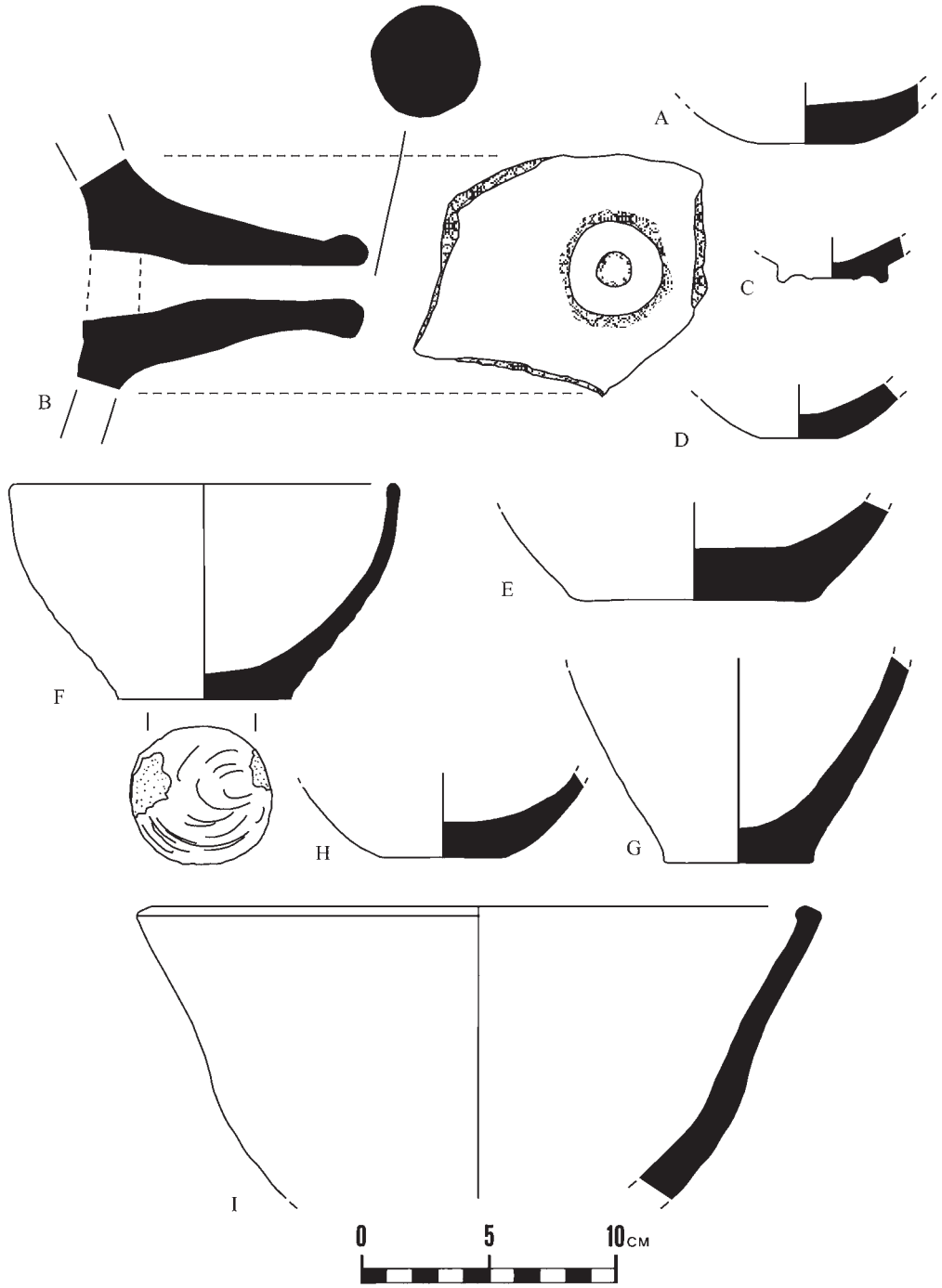


Fig. 11. Late Chalcolithic ceramics.

Figure 12 descriptions

A. D9 L20 KT5 #3: Light reddish brown exterior surface (5YR 6/4). Reddish yellow interior surface (5YR 6/6). Brown fabric (7.5YR 4/3). Abrupt transition to light brown core (7.5YR 6/3). Fine grit and chaff temper.

B. D9 L20 KT7 #1: Yellowish brown exterior surface and fabric (10YR 5/4). Light brown interior surface (7.5YR 6/4) grading to light olive brown (2.5YR 5/3). Medium grit and very fine chaff temper.

C. D9 L20 KT7 #2: Light yellowish brown exterior surface (10YR 6/4). Light brown interior surface (7.5YR 6/4). Yellowish brown fabric (10YR 5/4). Fine grit temper.

D. D9 L8 KT16 #4: Brownish yellow exterior surface (10YR 6/6). Yellowish brown interior surface (10YR 5/4). Strong brown fabric (7.5YR 5/6) grading to grayish brown core (2.5YR 5/2). Medium to very fine grit temper with some fine chaff. Large chaff impressions on exterior surface.

E. D9 L20 KT7 #5: Brown exterior surface (7.5YR 5/4). Brownish yellow interior surface (10YR 6/6). Brown fabric (7.5YR 4/3). Abrupt transition to light yellowish brown core (10YR 6/4). Medium to fine micaceous grit and medium to fine chaff temper. Blackened on exterior and interior surfaces. Bowl.

F. D9 L8 KT16 #6: Reddish yellow exterior and interior surfaces (5YR 6/6). Yellowish red fabric (5YR 5/8). Fine grit and very fine chaff temper. Haphazard horizontal burnishing on exterior surface. Manufacture groove below interior rim.

G. D9 L8 KT7 #3: Brown exterior surface (10YR 4/3). Brown interior surface (7.5YR 4/2). Dark grayish brown fabric (10YR 4/2). Fine grit temper.

H. D9 L20 KT5 #4: Brown exterior surface and fabric (7.5YR 4/4). Reddish brown interior surface (5YR 5/3). Medium angular grit and chaff temper. Painted decoration on exterior surface.

I. D9 L20 KT5 #2: Pink exterior surface (7.5YR 7/4). Light reddish brown interior surface and fabric (5YR 6/4). Fine rounded sand and chaff temper. Wheel incisions. Diameter uncertain.

J. D9 L8 KT7 #2: Yellowish red exterior and interior surfaces and fabric (5YR 5/6). Medium grit temper. Diameter uncertain.

K. D9 L8 KT7 #1: Light reddish brown exterior and interior surface (5YR 6/4). Light yellowish brown fabric (10YR 6/4) grading to light brownish gray core (10YR 6/2). Very fine grit and coarse chaff temper. Diameter uncertain.

L. D9 L20 KT7 #3: Light yellowish brown exterior and interior surfaces and fabric (10YR 6/4). Very fine grit and chaff temper.

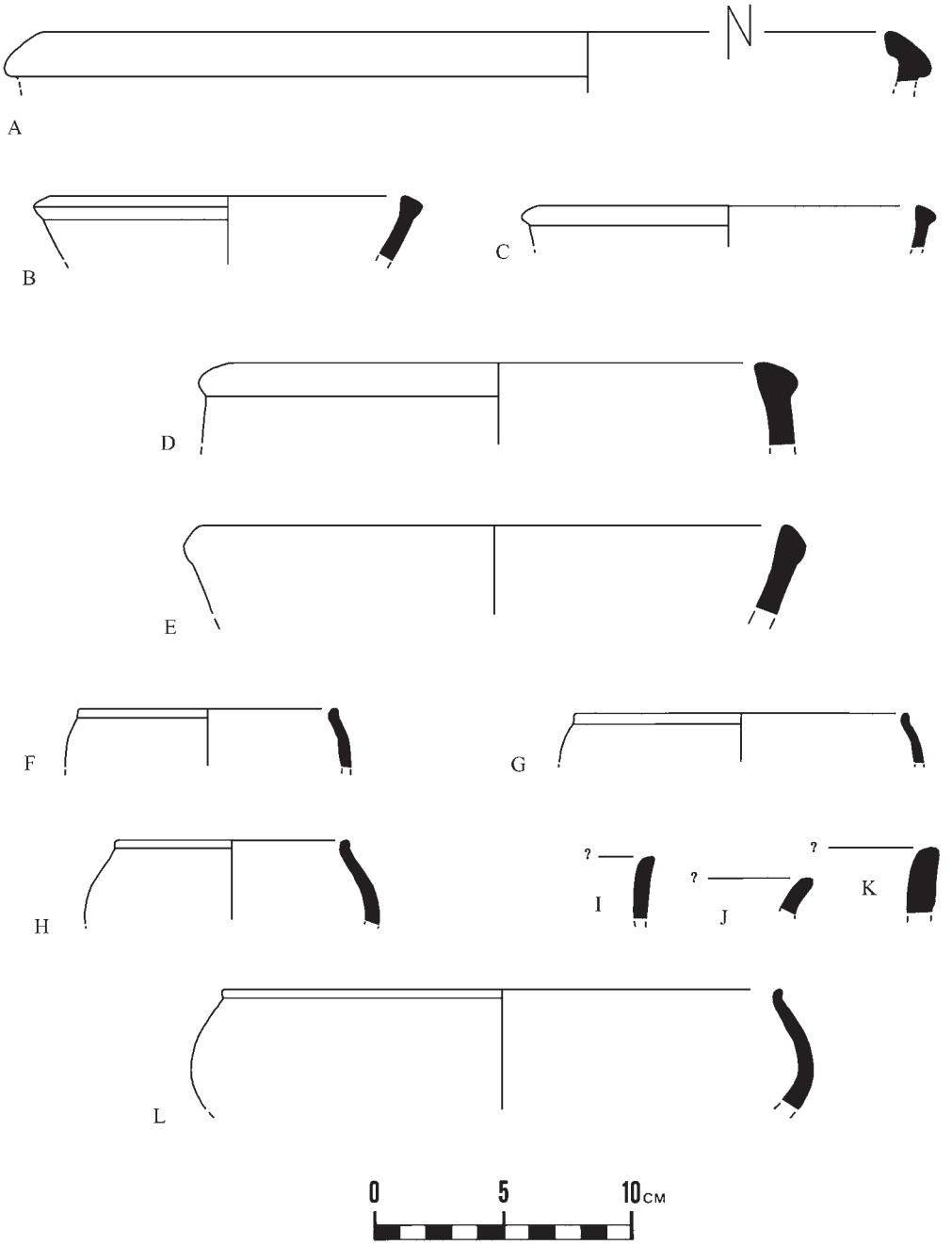


Fig. 12. Late Chalcolithic ceramics.

Figure 13 descriptions

A. D4 L5132 KT1 #1: Brown exterior surface (7.5YR 4/4). Strong brown core (7.5YR 5/8). Strong brown interior surface (7.5YR 4/6). Burnished interior and exterior surface. Fine grit and chaff temper.

B. D5 L5079 KT5554 #1: Brown exterior surface (10YR 5/3). Very dark grayish brown fabric (10YR 3/2) abruptly transitioning to a brown core (10YR 5/3). Dark grayish brown interior surface (2.5Y 4/2). Heavily blackened on the interior and exterior body. Large grit temper.

C. D5 L5132 KT1 #5: Red exterior surface (2.5YR 4/8). Yellowish red core (5YR 5/8). Red interior surface (2.5YR 5/8). Burnished interior and exterior surfaces. Medium size rounded grit and chaff temper. Diameter uncertain.

D. D5 L5094 KT11 #1: Weak red exterior surface (2.5 YR 4/2). Brown fabric (7.5 YR 4/2) grading to very dark grayish brown core (10 YR 3/2). Light reddish brown interior (2.5 YR 6/3). Coarse sandy grit temper.

E. E1 L1004 KT 1040 #9: Pink exterior surface (7.5YR 7/4) with dark reddish brown paint on exterior side of rim (5YR 3/2). Brown fabric (10YR 5/3) grading to grayish brown core (10YR 5/2). Light brown interior surface (7.5YR 6/3). Fine to medium grit temper. Diameter uncertain.

F. D5 L5079 KT5554 #2: Very pale brown exterior surface (10YR 7/3). Pink core (5YR 7/4). Very pale brown exterior surface (10YR 7/3). Dark reddish gray paint on exterior surface (7.5R 4/1). Five impressed bands across the shoulder to the base of the neck. Medium chaff temper with very fine white grit inclusions. Diameter uncertain.

G. D5 L5100 KT53 #1: Pale yellow exterior surface (2.5Y 8/2). Light gray core (2.5Y 7/2). Pale yellow interior surface (2.5Y 8/2). Brown paint on exterior surface (7.5R 5/2). Very fine grit temper.

H. E1 L1004 KT1040 #7: Reddish yellow exterior surface (7.5YR 7/6). Yellowish brown fabric (10YR 5/8) abruptly changing to dark gray core (10YR 4/1). Reddish yellow interior surface (7.5YR 7/6). Fine grit temper.

I. D5 L5146 KT6 #6: Dark gray exterior surface (5YR 4/1). Pink interior surface (7.5YR 7/4). Wash on interior surface. Dark gray paint (5YR 4/1) and fugitive pink paint (7.5YR 7/4). Fine grit temper. Diameter uncertain.

J. D5 L5146 KT6 #2: Light reddish brown exterior surface (2.5YR 7/4). Light brown fabric (7.5YR 6/3) grading to a red core (2.5YR 5/6). Light red interior surface (2.5YR 6/6). Fine chaff temper.

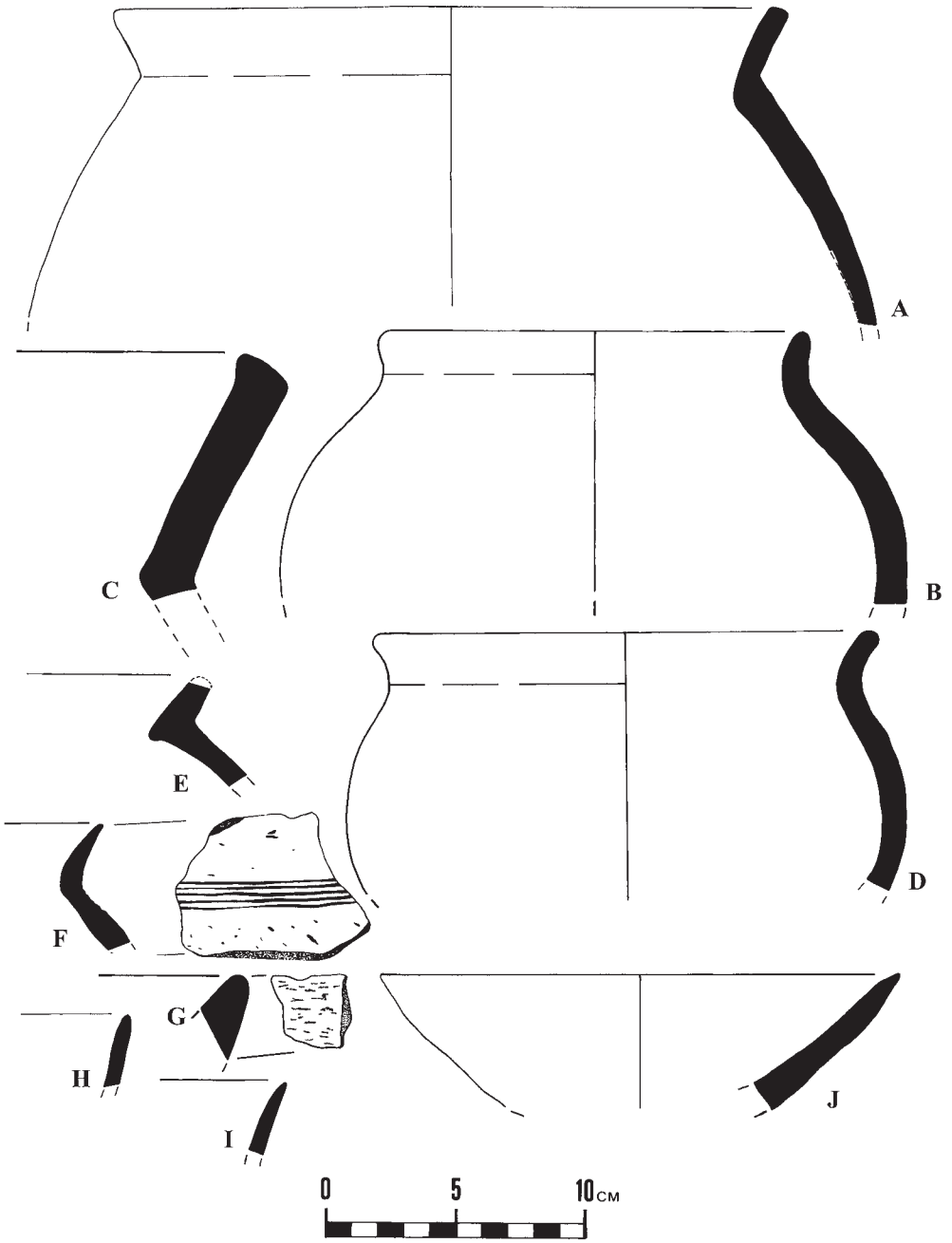


Fig. 13. Ubaid period ceramics.

Figure 14 descriptions

A. E1 L1004 KT1040 #8: Yellow burnished exterior surface (10YR 7/6). Yellowish brown fabric (10YR 5/8) abruptly changing to dark gray (10YR 4/1). Yellow burnished interior surface (10YR 7/6). Coarse grit temper.

B. D5 L5094 KT1 #4 and #5: Very pale brown exterior surface and core (10YR 8/3). Pink interior surface (5YR 7/4). Fine grit temper.

C. D5 L5094 KT41 #2: Light red exterior surface (2.5YR 6/6). Light red fabric (2.5YR 6/8) grading to a gray core (2.5Y 5/1). Light reddish brown interior surface (2.5YR 7/4). Fine chaff temper.

D. D5 L5100 KT50 #1: Pink (5YR 7/3) near lip grading to gray (5YR 5/1) on exterior body surface. Dark gray fabric (5YR 4/1) with an abrupt transition to a reddish gray core (5YR 5/2). Burnished interior and exterior surfaces. Exterior surface blackened by fire. Fine grit temper.

E. D5 L5117 KT7 #1: Light red exterior surface (2.5YR 6/6) grading to a reddish yellow core (5YR 6/6). Light brown interior surface (7.5YR 6/4). Weak red paint on the neck and slightly on the body (10R 4/2). Very fine grit temper.

F. D5 L5085 KT43 #1: Strainer. Light reddish brown exterior surface (2.5YR 6/4). Yellowish brown core (10YR 5/4). Light reddish brown interior surface (5YR 6/3). Impressions on exterior surface. Very fine grit temper.

G. D5 L5099 KT4 #1: Light gray exterior surface (10YR 7/2). Light gray core (10YR 7/2). Light gray interior surface (10YR 7/2). Very fine grit temper. Diameter uncertain.

H. D5 L5100 KT 53 #3: Flat bottom base. Very dark gray exterior surface (10YR 3/1) grading to a brown core (7.5YR 4/3). Brown interior surface (10YR 4/3). Burned on exterior surface. Very large white grit temper.

I. D5 L5132 KT1 #2: Light brown exterior surface (7.5YR 6/4) grading to a red core (10R 5/6). Light reddish brown interior surface (2.5YR 6/4). Burnished interior and exterior surfaces. Fine grit temper.

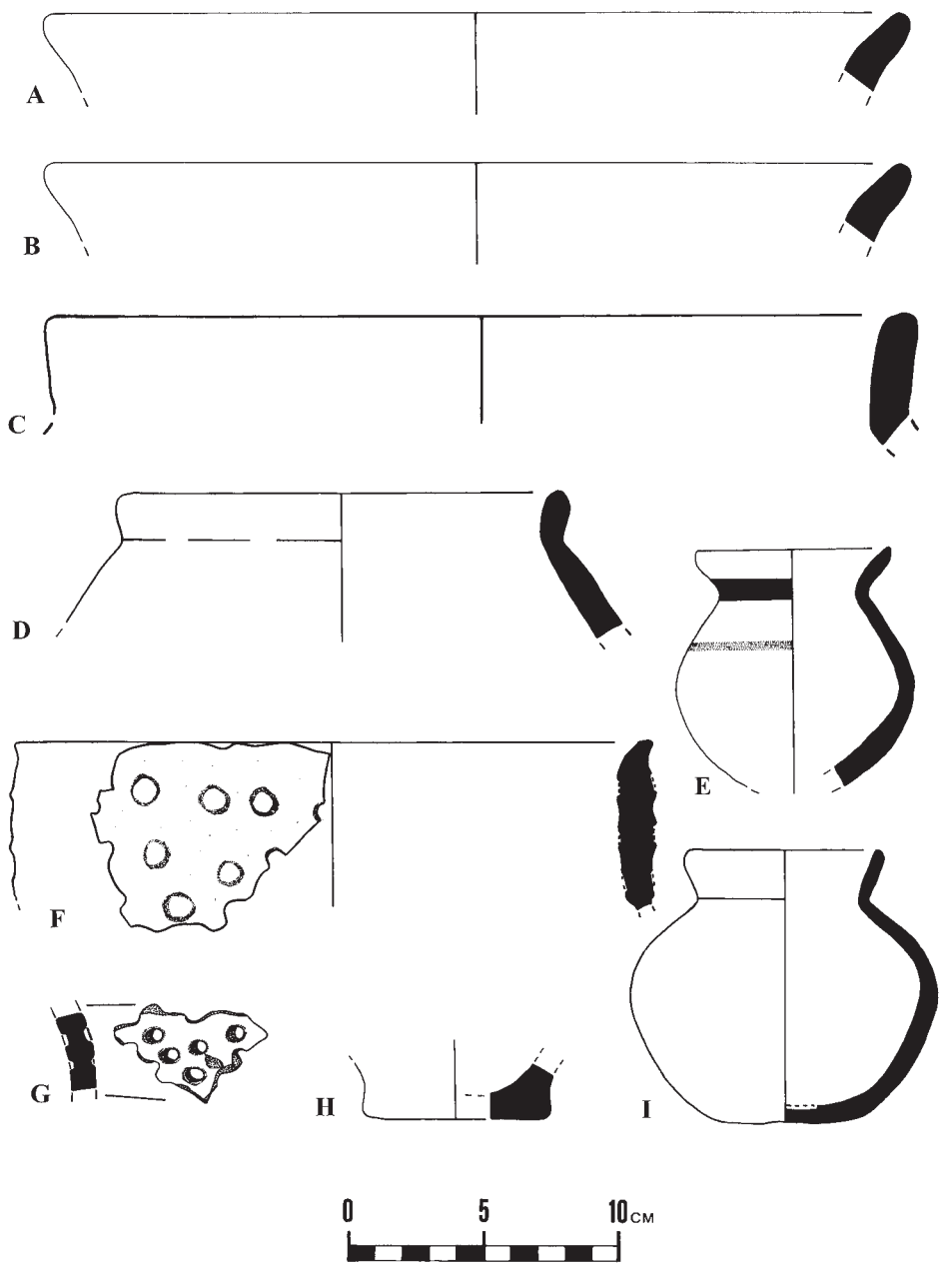


Fig. 14. Late Chalcolithic ceramics.

Figure 15 descriptions

A. E1 L1004 KT1040 #4: Yellow exterior surface (10YR 7/6). Yellowish brown core (10YR 5/4). Yellow interior surface (10YR 7/6). Fine to medium grit temper.

B. D5 L5094 KT1 #1: Pink exterior surface (7.5YR 7/4). Very dark gray fabric (7.5YR 3/1) with a light brown core (7.5YR 6/4). Pink interior surface (7.5YR 7/4). Fine grit and chaff temper.

C. E1 L1004 KT1040 #5: Yellow washed exterior surface (10YR 7/6). Yellowish brown fabric (10YR 5/8) abruptly changing to grayish brown (10YR 5/2). Yellow washed interior surface (10YR 5/8). Fine to medium grit and chaff temper.

D. D5 L5100 KT49 #1: Light red exterior surface (2.5YR 6/6). Gray fabric (5YR 5/1) with an abrupt transition to a reddish yellow core (5YR 6/6). Light red interior surface (2.5YR 6/6). Medium chaff temper.

E. E1 L1004 KT1040 #2: Reddish yellow smoothed exterior surface (7.5YR 7/6). Yellowish brown core (10YR 5/4). Reddish yellow interior surface (7.5YR 7/6). Fine grit and chaff temper. Diameter uncertain.

F. D5 L5029 KT5093 #3: Reddish yellow exterior surface (5YR 6/6). Reddish yellow core (5YR 6/6). Light reddish brown interior surface (5YR 6/4). Very fine grit temper.

G. D5 L5146 KT6 #5: Pink exterior surface (7.5YR 7/4). Pink interior surface (5YR 7/4). Striations visible on interior and exterior surfaces. Fine white grit temper.

H. E1 L1004 KT1040 #3: Reddish yellow exterior surface (7.5YR 7/6). Reddish yellow fabric (7.5YR 6/8) abruptly changing to gray core (7.5YR 5/1). Reddish yellow interior surface (7.5YR 7/6). Fine grit temper with chaff impressions on surfaces.

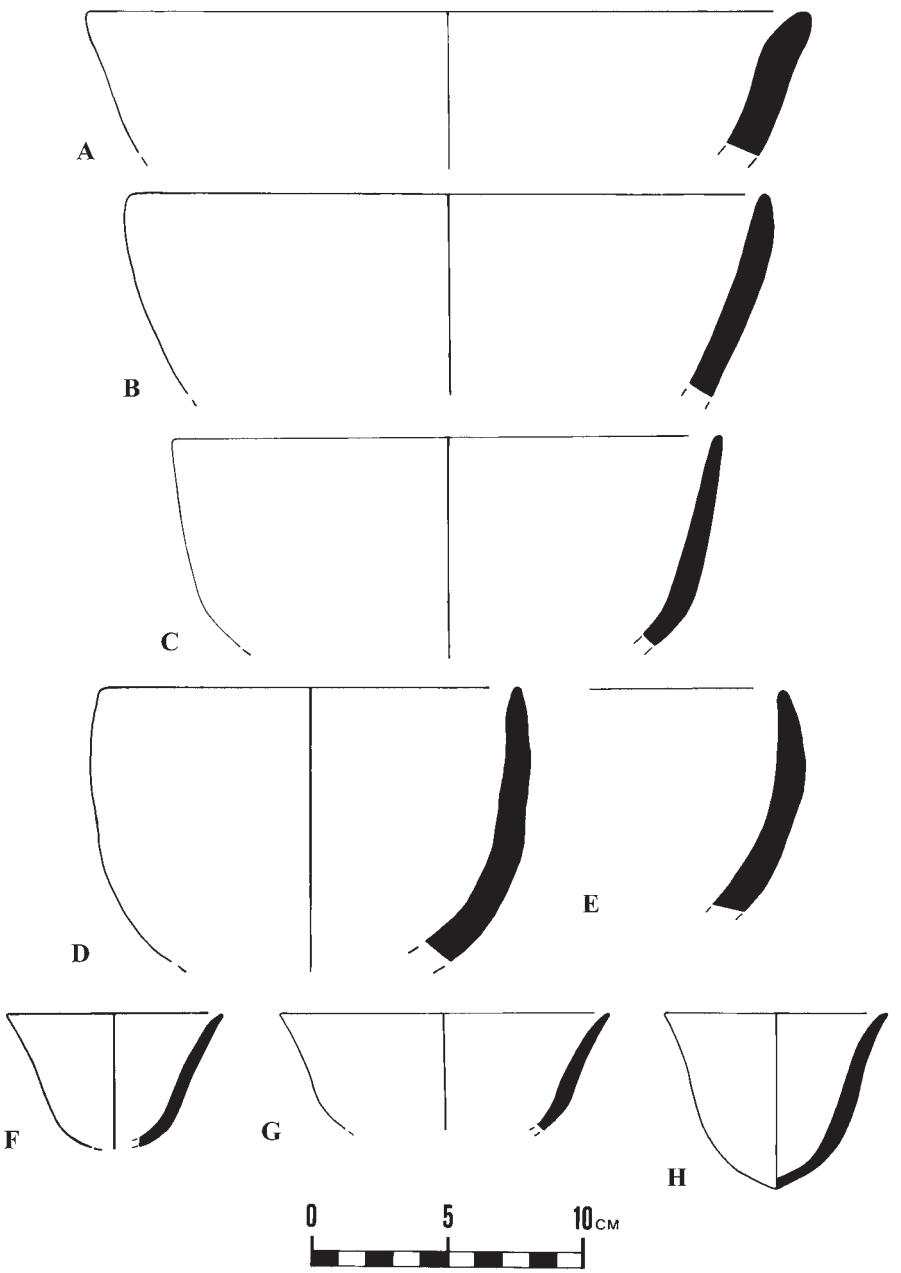


Fig. 15. Ubaid period ceramics.

Figure 16 descriptions

A. D5 L5146 KT6 #1: Dark gray surface (10YR 4/1). Reddish yellow fabric (7.5YR 6/6) abruptly transitioning to a black core (7.5YR 2.5/1). Large and fine grit temper.

B. D5 L5103 KT13 #1: Very pale brown exterior surface (10YR 8/4). Reddish yellow fabric (5YR 7/6) abruptly transitioning to a gray core (10YR 5/1). Dark brown paint on exterior and interior rim (7.5YR 3/3). Small to medium grit, including calcareous grit, and medium chaff temper.

C. D5 L5027 KT5211 #1: Light yellowish brown exterior surface (10YR 6/4). Reddish yellow fabric (7.5YR 6/6). Reddish yellow interior surface (7.5YR 6/6). Brown paint on exterior and interior rim (7.5YR 4/3). Fine grit and medium chaff temper.

D. D5 L5108 KT21 #1: Very pale brown exterior surface (10YR 8/3). Gray fabric (10YR 5/1) with an abrupt transition to a reddish yellow core (7.5YR 7/6). Gray interior surface (10YR 6/1). Dark brown paint on rim and exterior surface (7.5YR 3/2). Chaff impressions on interior and exterior surfaces. Medium chaff temper with some grit inclusions.

E. D5 L5079 KT5554 #4: Very pale brown exterior surface (10YR 7/4). Very pale brown core (10YR 7/4). Very pale brown interior surface (10YR 7/4). Dusky red paint on exterior surface (7.5R 3/2). Fine white grit temper with a few small air pockets. Diameter uncertain.

F. D5 L5079 KT5554 #5: Very pale brown exterior surface (10YR 7/4). Very pale brown core (10YR 7/4). Dusky red paint on exterior surface (7.5R 3/2). Fine small white grit temper. Diameter uncertain.

G. D5 L5094 KT1 #2: Very pale brown exterior surface (10YR 8/3). Very pale brown core (10YR 7/4). Pink interior surface (7.5YR 8/3). Dusky red paint on exterior surface (10R 3/2). Fine white grit temper. Diameter uncertain.

H. D5 L5079 KT5554 #3: Very pale brown exterior surface (10YR 7/4). Very pale brown core (10YR 7/4). Very pale brown interior surface (10YR 7/4). Dusky red paint on exterior surface (7.5R 3/2). Fine white grit temper with small air pockets on surfaces. Diameter uncertain.

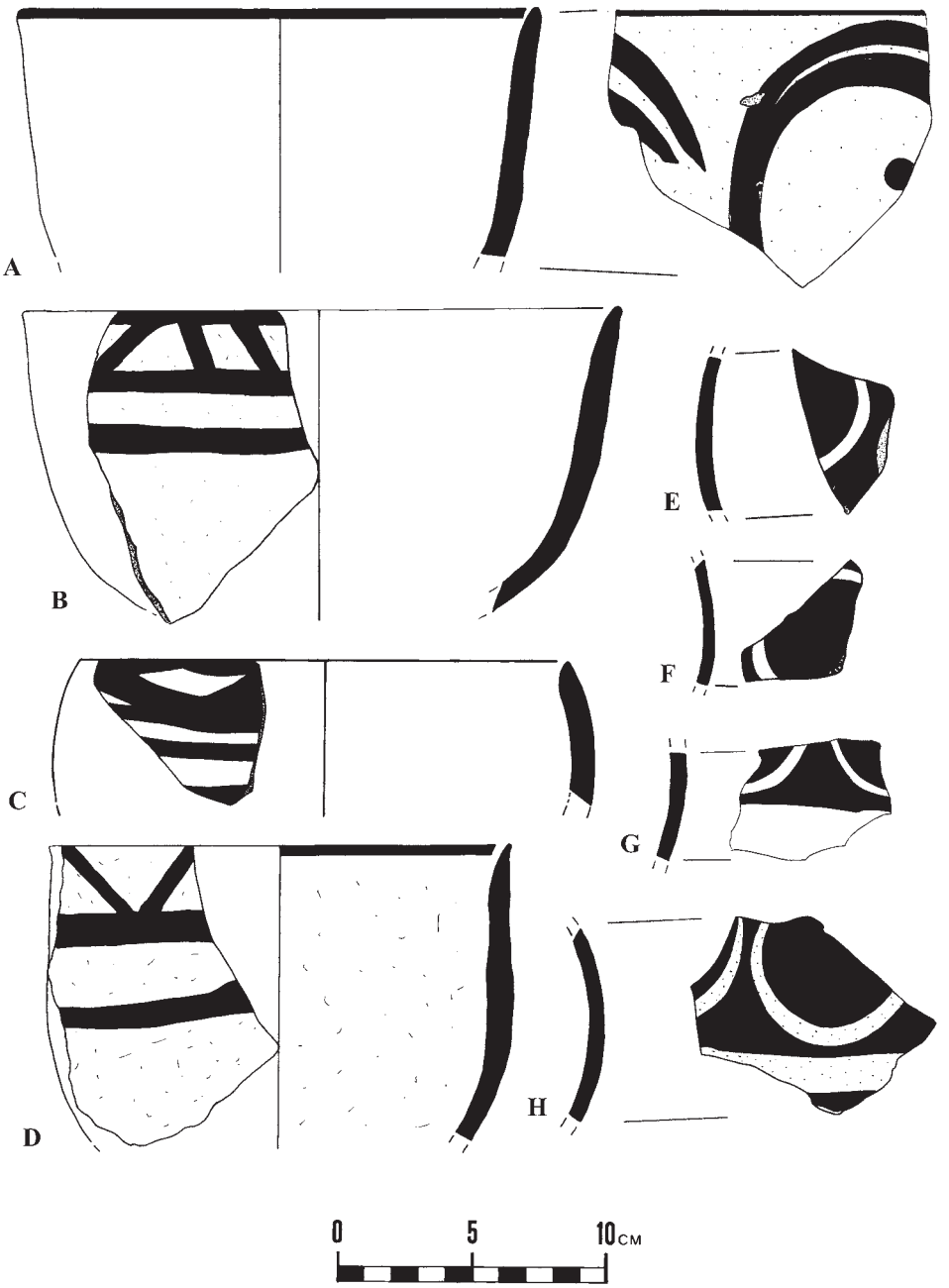


Fig. 16. Ubaid period ceramics.

Figure 17 descriptions

A. D5 L5029 KT5093 #1: Very pale brown exterior surface (2.5Y 8/3). Reddish yellow core (7.5YR 7/6). Pale yellow interior surface (10YR 8/4). Medium chaff temper. Dark brown paint (10YR 3/3).

B. D5 L5029 KT5093 #2: Pale yellow exterior surface (2.5Y 8/2). Very pale brown core (10YR 7/4). Pale yellow interior surface (2.5Y 8/2). Very dark grayish brown paint (10YR 3/2). Fine grit temper.

C. D5 L5094 KT21 #1: Pink exterior surface. Light red paint on exterior surface. Temper not noted.

D. D5 L5109 KT1 #1: Dusky red exterior surface (10R 3/2) grading to a very pale brown core (10YR 7/4). Pale yellow interior surface (2.5YR 8/3). Dark brown paint on exterior surface. Cream wash on interior surface. Fine grit temper.

E. D5 L5019 KT5136 #1: Dusky red exterior surface (10R 3/2) grading to a very pale brown core (10YR 7/4). Pale yellow interior surface (2.5YR 8/3). Dark brown paint on exterior surface. Cream wash on interior surface. Fine grit temper.

F. D5 L5039 KT5291 #2: Light red exterior surface (2.5YR 6/6). Light red fabric (2.5YR 6/6) changing to light gray core (10YR 7/1). Light red interior surface (2.5YR 7/6). Dark gray painted decoration (7.5YR 4/1). Fine grit temper.

G. D5 L5132 KT1 #3: Light gray exterior surface (2.5Y 7/2). Light yellowish brown core (10YR 6/4). Light brownish gray interior surface (2.5Y 6/2). Burnished interior and exterior surfaces. Wash on interior and exterior surfaces. Dark yellowish brown paint on exterior surfaces (10YR 3/4). Very fine chaff and grit temper.

H. D5 L5100 KT48 #1: Light reddish brown exterior surface (5YR 6/4). Yellowish red core (5YR 5/6). Yellowish red interior surface (5YR 5/6). Burnished interior and exterior surfaces. Incised and impressed decorations on exterior surface. Reddish brown paint on the rim, the neck, and probably on the body (5YR 4/4). Chaff temper.

I. D5 L5100 KT53 #1: Light red exterior surface. Exterior surface is painted reddish brown. Temper not noted.

J. D5 L5109 KT1 #2: Light red exterior surface (2.5YR 6/6) grading to a reddish yellow core (5YR 6/6). Light red interior surface (2.5YR 6/6). Burnished interior and exterior surfaces. Wash on the exterior surface. Reddish brown paint on the exterior surface (5YR 4/4). Fine grit and chaff temper. Diameter uncertain.

K. D5 L5132 KT1 #4: Very pale brown exterior surface (10YR 8/4). Very pale brown core (10YR 7/3). Pale yellow interior surface (2.5Y 7/4). Burnished on interior and exterior surfaces. Pale wash on exterior surface. Dark brown paint on exterior surface (7.5YR 3/4). Very fine grit and chaff temper. Diameter uncertain.

L. D5 L5094 KT41 #1: Very pale brown exterior surface (10YR 7/3). Right brown core (7.5YR 6/4). Pink interior surface (7.5YR 7/4). Very light cream wash on exterior surface. Dark reddish gray paint on exterior surface (7.5R 3/1). Fine chaff temper. Diameter uncertain.

Fig. 17. Ubaid period ceramics.

Figure 18 descriptions

A. D5 L5190 KT1 #4: Brown exterior surface (7.5YR 5/4). Dark grayish brown fabric (10YR 4/2) abruptly changing to a very dark gray core (10YR 3/1). Brown interior surface (7.5YR 5/4). Fine chaff temper.

B. D5 L5160 KT3 #5: Pink exterior surface (7.5YR 7/3). Gray to dark gray core (2.5Y 4.5/1). Yellowish brown interior surface (2.5Y 6/3). Fine to very large grit and medium chaff temper.

C. D5 L5160 KT3 #2: Pale yellow exterior surface (2.5Y 7/3). Light olive brown fabric (2.5Y 5/4) abruptly changing to a strong brown core (7.5YR 5/6). Pink interior surface. Fine grit and fine chaff temper.

D. D5 L5160 KT 3 #6: Light brown exterior surface (7.5YR 6/4). Strong brown fabric (7.5YR 5/6) grading to a dark grayish brown core (10YR 4/2). Brown interior surface (7.5YR 5/3). Fine and medium grit and fine chaff temper.

E. D5 L5160 KT3 #3: Yellowish red exterior surface (5YR 5/8). Red fabric (2.5YR 5/8). Yellowish red interior surface (5YR 5/8). Fine grit and few fine chaff temper.

F. D5 L5160 KT3 #10: Yellow exterior surface (2.5YR 7/6). Brown fabric (7.5YR 4/4) grading to a yellowish brown core (10YR 5/4). Very dark grayish cross hatched design painted on exterior surface (10YR 3/2). Very fine grit temper.

G. D5 L5190 KT1 #2: Reddish yellow exterior surface (5YR 6/8). Strong brown fabric (7.5YR 5/8). Reddish yellow interior surface (5YR 6/8). Dark reddish brown painted on exterior surface (5YR 3/2). Fine grit and fine chaff temper.

H. D5 L5169 KT2 #2: Yellowish brown exterior surface (10YR 6/4). Yellowish brown fabric (10YR 5/4) abruptly changing to a very dark gray core (10YR 3/1). Horizontal burnished on interior and exterior surfaces. 1g to fine grit temper.

I. D5 L5198 KT13 #1: Yellowish red exterior surface (5YR 5/6). Yellowish red fabric (5YR 5/6). Yellowish red interior surface (5YR 5/6). Red painted on exterior surface (10R 5/6). Very fine grit temper.

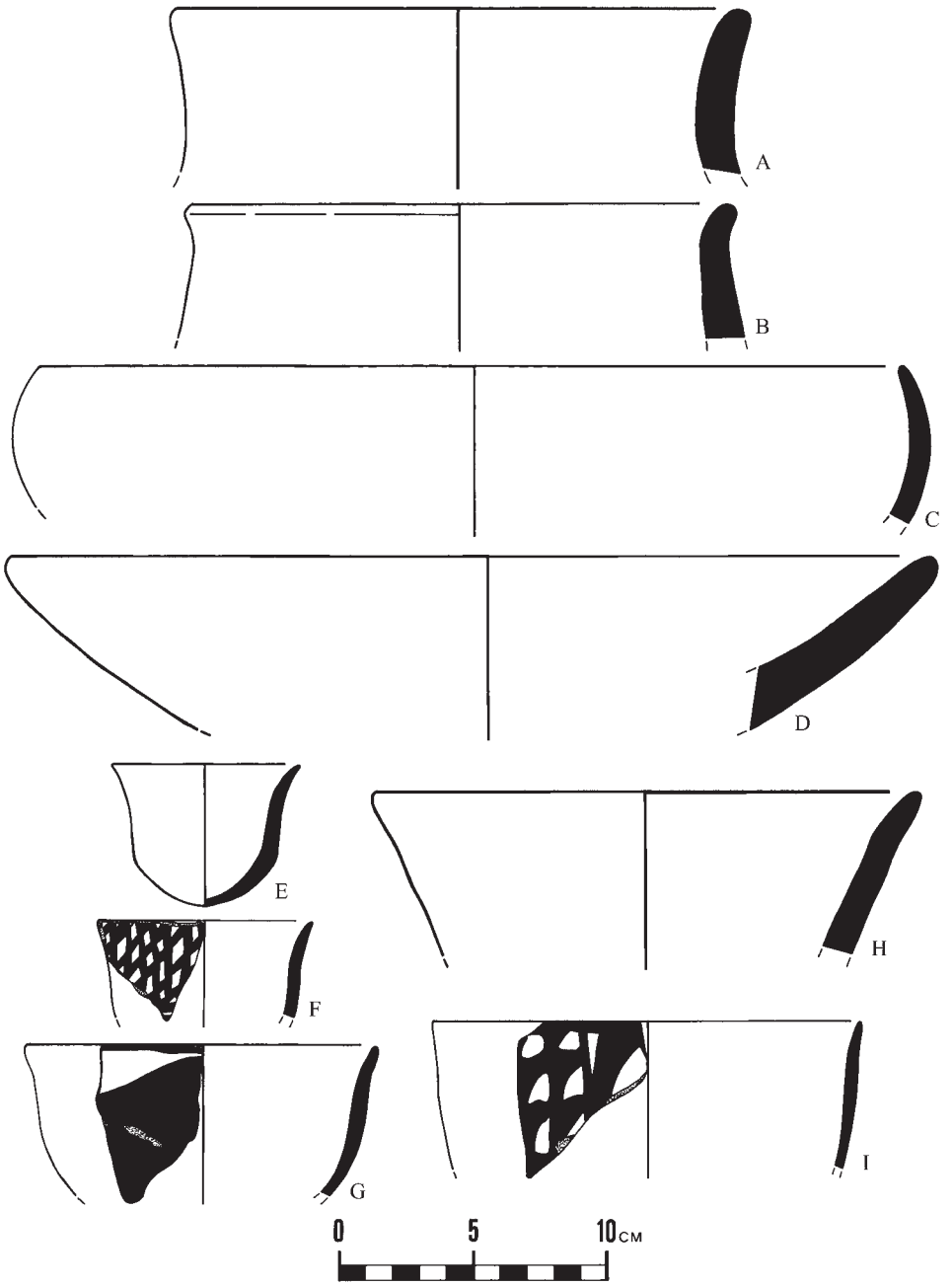


Fig. 18. Ubaid period ceramics.

Figure 19 descriptions

A. E2 L25 KT7 #2: Brown exterior surface (10YR 5/3). Black fabric (5Y 2.5/2). Brown interior surface. Three black bichrome bands painted on exterior surface (5Y 2.5/1), dusky red central band (10R 3/2). Fine micaceous grit temper.

B. E2 L25 KT10 #2: Light yellowish brown exterior surface (10YR 6/4). Very dark gray fabric (7.5YR 3/1). Light brown interior surface. Dark gray painted on exterior surface (10YR 4/1). Fine grit temper.

C. E2 L25 KT10 #5: Very pale brown exterior surface (10YR 7/3). Very dark gray fabric (2.5YR 3/1). Light brown interior surface (7.5YR 6/4). Brown painted on exterior surface (7.5YR 5/3). Medium and fine micaceous grit temper.

D. D5 L5190 KT1 #3: Yellowish red exterior surface (5YR 6/6). Strong brown fabric (7.5YR 5/6). Light reddish brown interior surface (5YR 6/4). Dusky red painted on exterior surface (2.5YR 3/2). Very fine grit and medium chaff temper.

E. E2 L24 KT3 #1: Light brown exterior surface (7.5YR 6/4). Reddish yellow fabric (7.5YR 6/6) abruptly changing to a light yellow brown core (2.5Y 6/3). Reddish yellow interior surface (7.5YR 6/6). Horizontal incised lines on exterior surface. Fine grit and fine chaff temper.

F. E2 L9 KT2 #7: Very pale brown exterior surface (10YR 8/4). Very pale brown fabric (10YR 8/3) grading to a light gray core (10YR 7/2). Dark brown painted design on exterior surface (7.5YR 3/2). Medium grit and medium chaff temper.

G. E2 L40 KT2 #9: Pink exterior surface (7.5YR 8/4). Red fabric (2.5YR 5/8) abruptly changing to a dark grayish brown core (10YR 4/2). Dusky red painted on exterior surface (10R 3/2). Wash on interior and exterior surfaces. Fine grit and medium chaff temper.

H. E2 L25 KT10 #7: Pale brown exterior surface (10YR 6/3). Strong brown fabric (7.5YR 6/4). Brown painted on exterior surface (7.5YR 5/2). Very fine grit and very fine micaceous temper.

I. E2 L25 KT10 #1: Very pale brown exterior surface (10YR 7/3). Strong brown fabric (7.5YR 5/6). Light brown interior surface (7.5YR 6/4). Impressed on exterior surface. Fine grit temper.

J. E2 L24 KT6 #4: Pale yellow exterior surface (2.5Y 7/3). Reddish yellow fabric (7.5YR 6/6) abruptly changing to a gray core (2.5Y 5/1). Pale yellow interior surface (2.5Y 7/3). Brown painted (7.5YR 5/2). Medium grit, coarse chaff and fine micaceous grit temper.

K. E2 L25 KT10 #6: Very pale brown exterior surface (10YR 7/4). Brown fabric (10YR 5/3). Light yellowish brown interior surface (10YR 6/4). Incised lines on exterior surface. Medium and coarse micaceous grit and coarse chaff temper.

L. E2 L24 KT6 #5: Pale yellow exterior surface (2.5Y 7/3). Reddish yellow fabric (7.5YR 6/6) abruptly changing to a gray core (2.5Y 5/1). Pale yellow interior surface (2.5Y 7/3). Brown painted on exterior surface (7.5YR 5/2). Fine and medium grit temper.

M. E2 L25 KT10 #4: Pale brown exterior surface (10YR 6/3). Very pale brown fabric (10YR 7/4). Pale brown interior surface (10YR 6/3). Brown painted on exterior surface. Fine grit temper.

N. E2 L25 KT7 #8: Pale yellow exterior surface (5Y 8/3). Yellowish brown fabric (10YR 5/4) grading to a dark grayish brown core (10YR 4/2). Pale yellow interior surface (2.5Y 7/4). Very dark grayish brown painted along the top of rim (10YR 3/2). Wash on exterior surface. Very few medium grit and fine chaff temper.

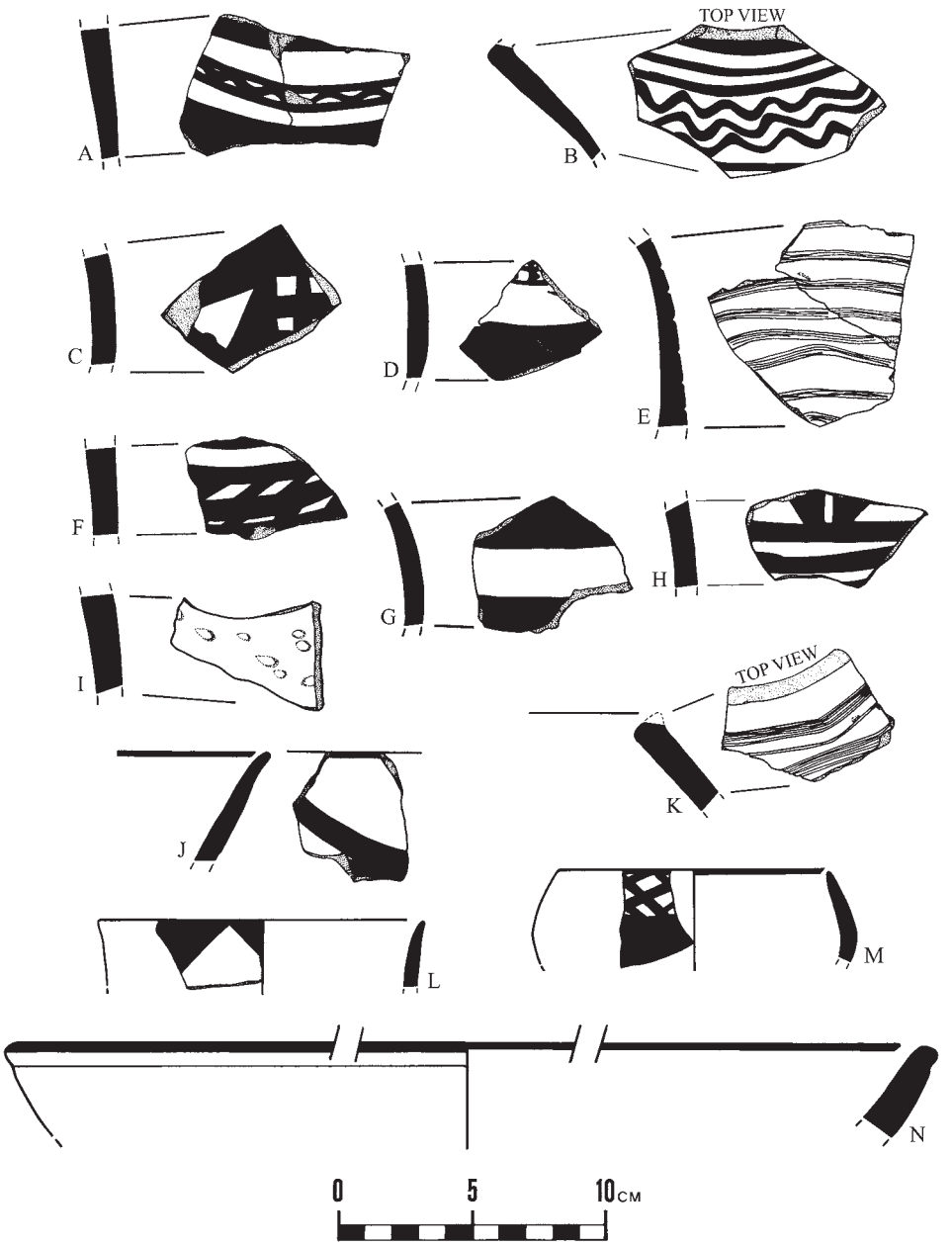


Fig. 19. Ubaid period ceramics.

Figure 20 descriptions

A. E2 L18 KT7 #1: Yellowish brown exterior surface (10YR 5/4). Light brown fabric (10YR 6/2) abruptly changing to a black core (5Y 2.5/1). Yellowish brown interior surface (10YR 5/4). Large quartz grit (pebble size) and very large chaff temper.

B. E2 L25 KT7 #7: Brown exterior surface (7.5YR 6/3). Strong brown fabric (7.5YR 5/6) abruptly changing to a dark gray core (5Y 4/1). Pink interior surface (7.5YR 7/4). Three incised lines on the exterior rim. Very fine grit and fine chaff temper.

C. E2 L16 KT15 #1: Light brown exterior surface (7.5YR 6/4). Light brown core (7.5YR 6/4). Light brown interior surface (7.5YR 6/4). Knob on rim. Fine grit and fine chaff temper.

D. E2 L18 KT 7 #2: Reddish yellow exterior surface (7.5YR 7/6). Reddish yellow fabric (7.5YR 7/6) abruptly changing to a dark grayish brown core (10YR 4/2). Burnished on interior and exterior surfaces. Fine grit and fine chaff temper.

E. E2 L18 KT7 #3: Light yellowish brown exterior surface (10YR 6/4). Light brown fabric (7.5YR 6/4) abruptly changing to a bluish black core (2.5/5 PB). Light yellowish brown interior surface (10YR 6/4). Horizontal burnished on interior and exterior surfaces. Small to large grit and chaff temper.

F. E2 L25 KT10 #3: Light reddish brown exterior surface (5YR 6/4). Light brown fabric (7.5YR 6/4) abruptly changing to a gray core (10YR 5/1). Medium grit temper.

G. E2 L24 KT3 #3: Yellowish brown exterior surface (10YR 6/4). Yellowish brown fabric (10YR 5/4) abruptly changing to a bluish black core (5B 2.5/1). Yellowish brown interior surface (10YR 5/4). Fine grit and few very fine chaff temper.

H. E2 L24 KT3 #2: Brown exterior surface (10YR 5/3). Brown fabric (7.5YR 4/2) abruptly changing to a very dark gray core (7.5YR 3/1). Yellowish brown interior surface (10YR 5/4). Horizontal scant burnished on interior and exterior surfaces. Very large grit and very large to medium chaff temper and chaff faced on exterior surface.

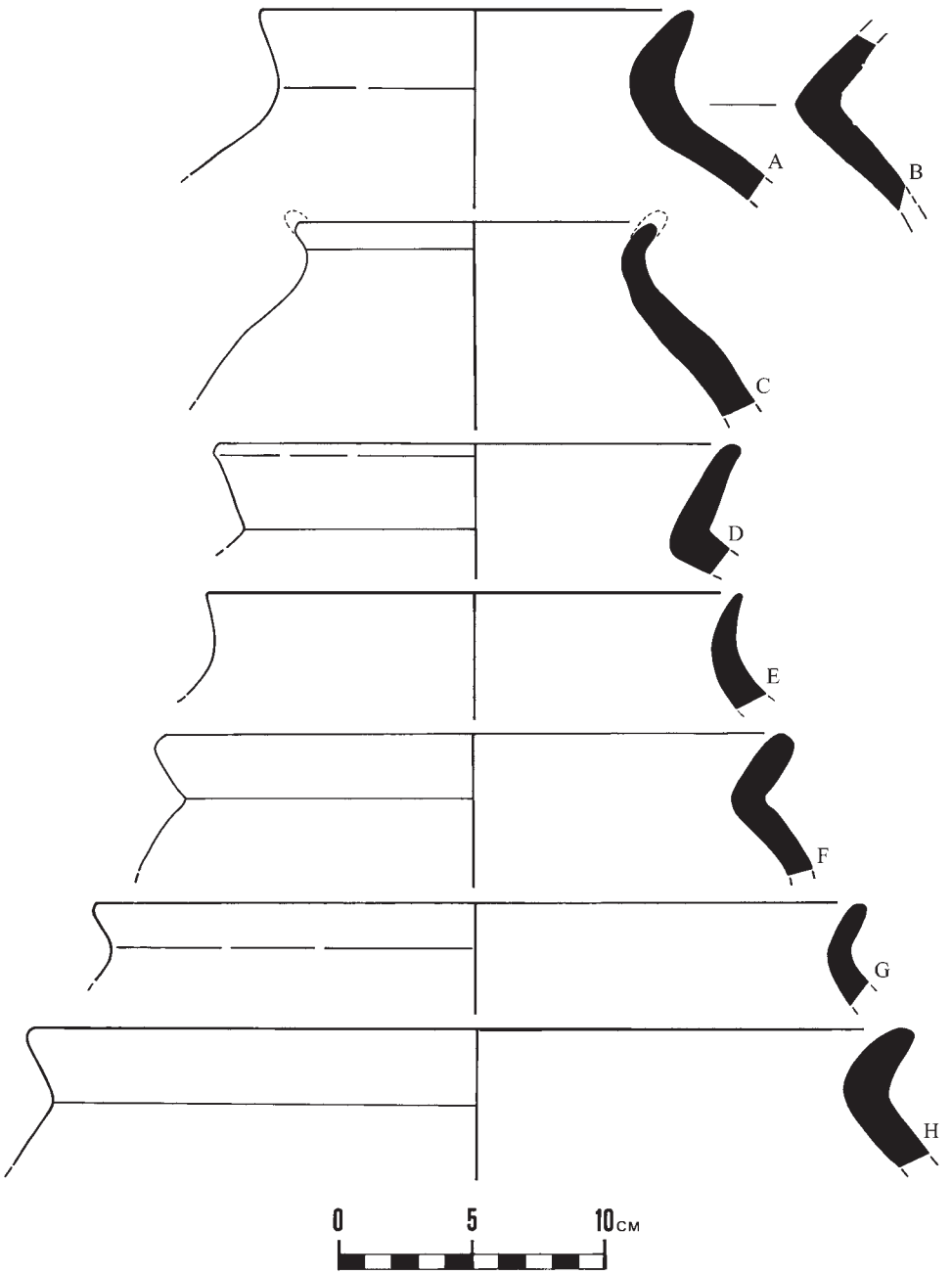


Fig. 20. Ubaid period ceramics.

Figure 21 descriptions

A. D5 L5011 KT5050 #1: Very dark gray exterior surface (2.5Y 6/2). Light olive brown fabric (2.5Y 5/3). Light brownish gray interior surface (2Y 3/1). Fine grit temper. Dark grayish brown (2.5Y 4/2) and dark gray paint (2.5YR 4/1) on exterior. Black paint on interior rim (2.5Y 2.5/1).

B. D8 L58 KT8 #7: Very pale brown exterior surface (10YR 7/4). Reddish yellow fabric (7.5YR 6/6). Pink interior surface (7.5YR 7/4). Fine grit temper. Brown paint (7.5YR 5/4).

C. E2 L24 KT6 #5: Pale yellow exterior surface (2.5Y 7/3). Reddish yellow fabric (7.5YR 6/6) abruptly transitioning to a gray core (2.5Y 5/1). Pale yellow interior surface (2.5Y 7/3). Fine and medium grit temper. Brown paint on exterior surface (7.5YR 5/2).

D. E2 L40 KT2 #6: Reddish yellow exterior surface and fabric (7.5YR 6/6) abruptly transitioning to a brown core (7.5YR 5/2). Reddish yellow interior surface (10YR 7/4). Medium and fine grit and fine chaff temper. Dusky red paint on exterior (2.5YR 3/2).

E. E2 L40 KT2 #8: Reddish yellow exterior and interior surfaces and fabric (5YR 7/6) with an abrupt transition to a very pale brown core (10YR 7/4). Large and medium grit and fine chaff temper. Dark brown paint (7.5YR 3/2).

F. D10 L7 KT2 #1: Pink exterior surface (5YR 7/3). Pinkish gray interior surface (5YR 7.2). Fine chaff temper. Scraped on exterior.

G. D8 L58 KT1 #2: Pink exterior surface (7.5YR 8/4). Reddish yellow fabric (7.5YR 6/6) abruptly changing to very dark gray core (7.5YR 3/1). Reddish yellow interior surface (7.5YR 7/6). Fine to large micaceous grit and chaff temper. Chaff faced. Dark brown paint (7.5 YR 3/2).

H. D8 L110 KT1 #1: Pale red exterior surface (10R 7/4). Light reddish brown fabric (2.5YR 6/4). Light reddish brown interior surface (2.5YR 6/4). Very fine grit temper. Reddish brown paint (5YR 4/3).

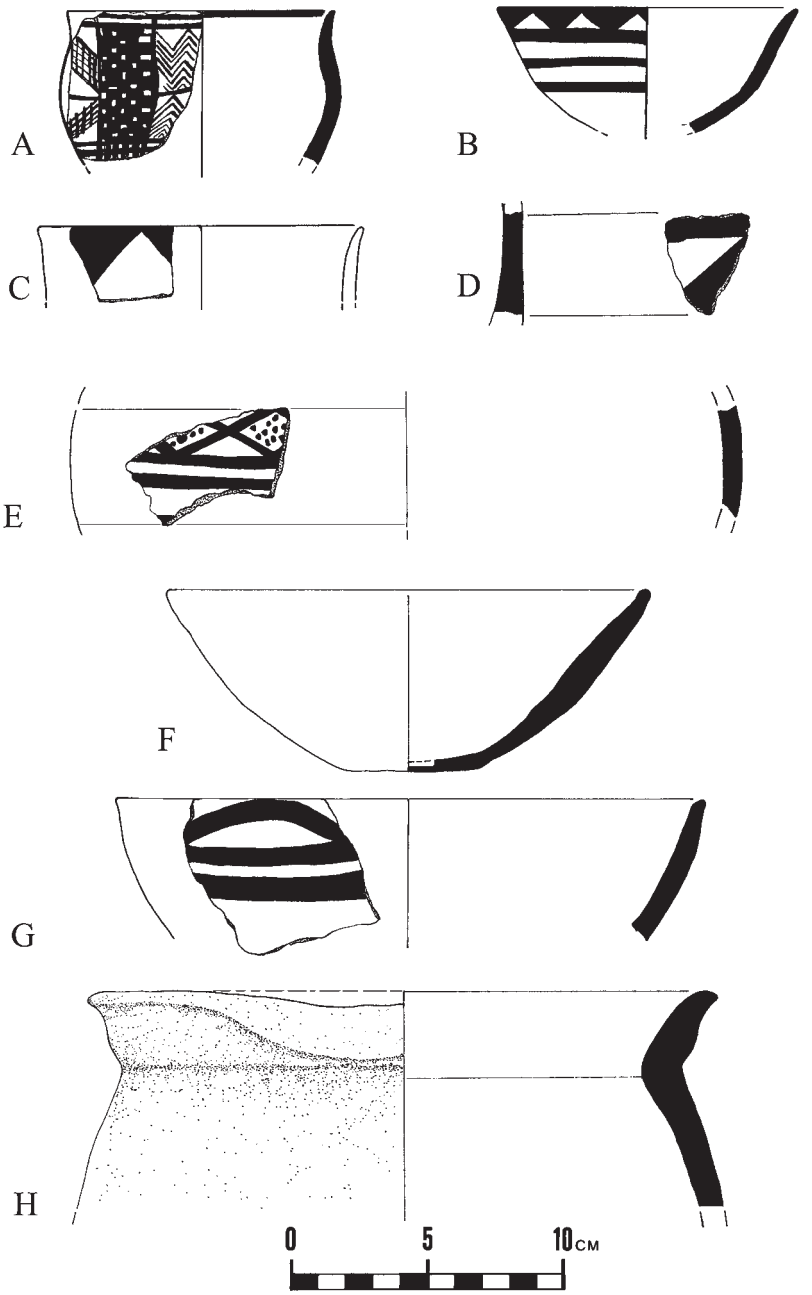


Fig. 21. Ubaid period ceramics.

Figure 22 descriptions

A. E2 L94 KT6 #2: Pale yellow exterior surface (2.5YR 7/3). Pale brown fabric (10YR 6/3). Very pale brown interior surface (10YR 7/3). Very fine grit temper. Scraped on exterior.

B. D8 L70 KT4 #3: Light brown exterior surface (7.5YR 6/4). Strong brown fabric (7.5YR 5/3) grading to a dark gray core (2.5Y 4/1). Brown interior surface (7.5YR 5/3). Fine micaceous grit temper. Dark brown (7.5YR 3/2) paint.

C. D5 L5203 KT1 #3: Very dark gray exterior surface (7.5YR 3/1). Very dark gray fabric (7.5YR 3/1). Gray interior surface (7.5YR 5/1). Medium grit temper with some large grit inclusions. Chaff faced. Burned and scraped on exterior.

D. D5 L5160 KT3 #9: Pink exterior surface (7.5YR 7/3). Pink interior surface (7.5YR 7/3). Brown core (7.5YR 5/4). Medium and fine grit, few fine chaff temper.

E. D8 L70 KT1 #1: Black exterior and interior surfaces (2.5Y 2.5/1). Fine and medium grit temper.

F. E2 L25 KT7 #6: Pink exterior surface (7.5YR 7/3). Reddish yellow fabric (7.5YR 6/8) abruptly transitioning to a very dark gray core (7.5YR 3/1). Pink interior surface (7.5YR 7/4). Fine grit and fine chaff temper.

G. D8 L89 KT4 # 1: Light brown exterior and interior surfaces (7.5YR 6/3). Reddish yellow fabric (5YR 6/6) grading to a gray core (5YR 6/1). Very fine chaff and grit temper.

H. E2 L25 KT8 #2: Light gray exterior and interior surfaces (2.5YR 7/2). Light gray core (2.5YR 7/2). Very fine chaff and grit temper.

I. E2 L25 KT10 #6: Light yellowish brown exterior surface (10YR 6/4). Brown fabric (10YR 5/3) abruptly changing to black core (7.5YR 2.5/1). Fine and medium grit temper.

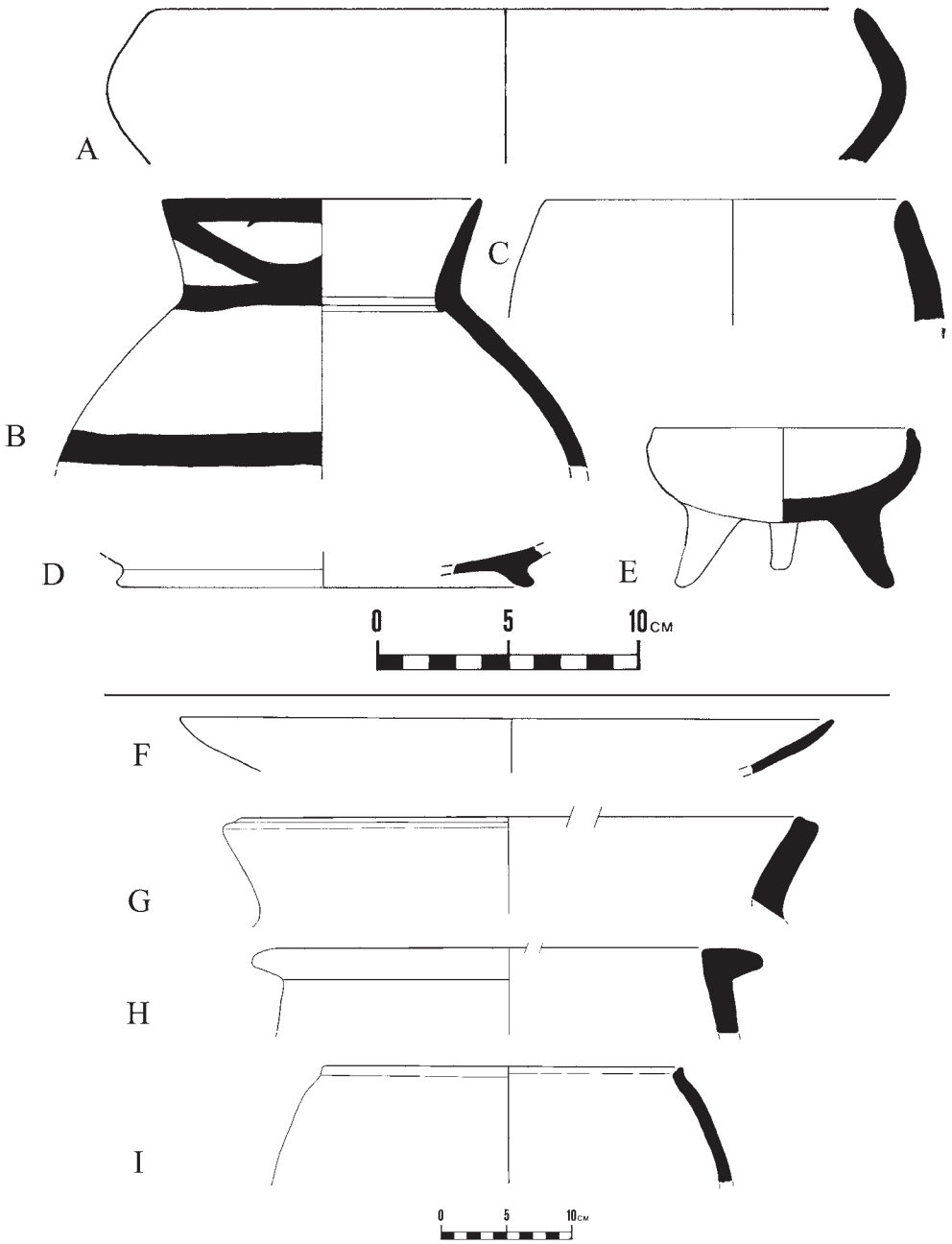


Fig. 22. Ubaid period ceramics.

Figure 23 descriptions

A. E2 L25 KT18 #1: Blade-like flake, both ends truncated. Gloss on right edge that extends to flake ridge on dorsal surface and wide band on ventral. Light brown flint.

B. E2 L24 KT10 #1: Blade-like flake with faceted butt. Distal end truncated (slightly concave). Gloss on right edge that extends to flake ridge on dorsal surface and wide band on ventral. Light brown flint.

C. D5 L5169 KT8 #1: Blade-like flake, both ends truncated (proximal inversely). Gloss on both faces of right edge which is also chipped and slightly rounded. Light pinkish-beige opaque flint (subjected to heat?). Reddish cortex.

D. D5 L5190 KT26 #1: Flake with dihedral striking platform and terminating in hinge fracture. Gloss on right edge (damaged) to ridge on dorsal surface and wide band on ventral. Light orange-brown flint.

E. E2 L24 KT2 #1: Piercer on broken flake of grey flint; stained area on left side and cortex. Point is prounced and formed by abrupt scaled retouch in concave area of right side and on broken area; some spalling on ventral surface at tip.

F. E2 L25 KT17 #1: Piercer on broken blade-like flake. Short point formed by abrupt retouch on both sides at distal end. Light grey flint.

G. E2 L8 KT2 #1: Piercer on broken blade-like flake. Short point off-set by nibbling retouch on both sides forming concave area at distal end. Light grey flint.

H. E2 L25 KT11 #1: Scraper. Semi-abrupt retouch across distal end forming a straight edge on flake of light grey flint. Plain striking platform with ring crack and resolved bulb of percussion.

I. F1 L1117 KT8 #1: Denticulate. Abrupt retouch around about three-quarters of the circumference of a thick flake forming a denticulated contour. Mid-brown flint, slightly patinated and with water-worn cortex.

J. E2 L24 KT10 #2: Possible piercer. Short point on distal end of flake has been off-set by light retouch in concave areas. Short stretch of abrupt retouch on left edge. Light grey flint; small patch of cortex.

K. D5 L5169 KT3 #1: Scraper. Abrupt scaled and somewhat denticulated retouch on left edge of large flake. Mid-brown matt banded flint; cortex weathered. Dihedral striking platform.

L. D5 L5190 KT10 #1: Blade segment. Right edge rounded and worn smooth. Mid-dark brown flint with inclusions.

M. D9 L11 KT6 #1: Blade segment. Right edge irregularly chipped and edge partly rounded/worn edge. Beige-grey flint.

N. E2 L25 KT8 #1: Blade. Distal segment of thick blade. Edges and distal end have regular chipping. Possibly retouched. Mid-brown flint; weathered cortex.

O. E2 L25 KT17 #2: Backed blade-like flake. The thicker left edge has abrupt retouch on distal half. Right edge irregularly chipped. Plain striking platform with ring crack and double bulb of percussion.

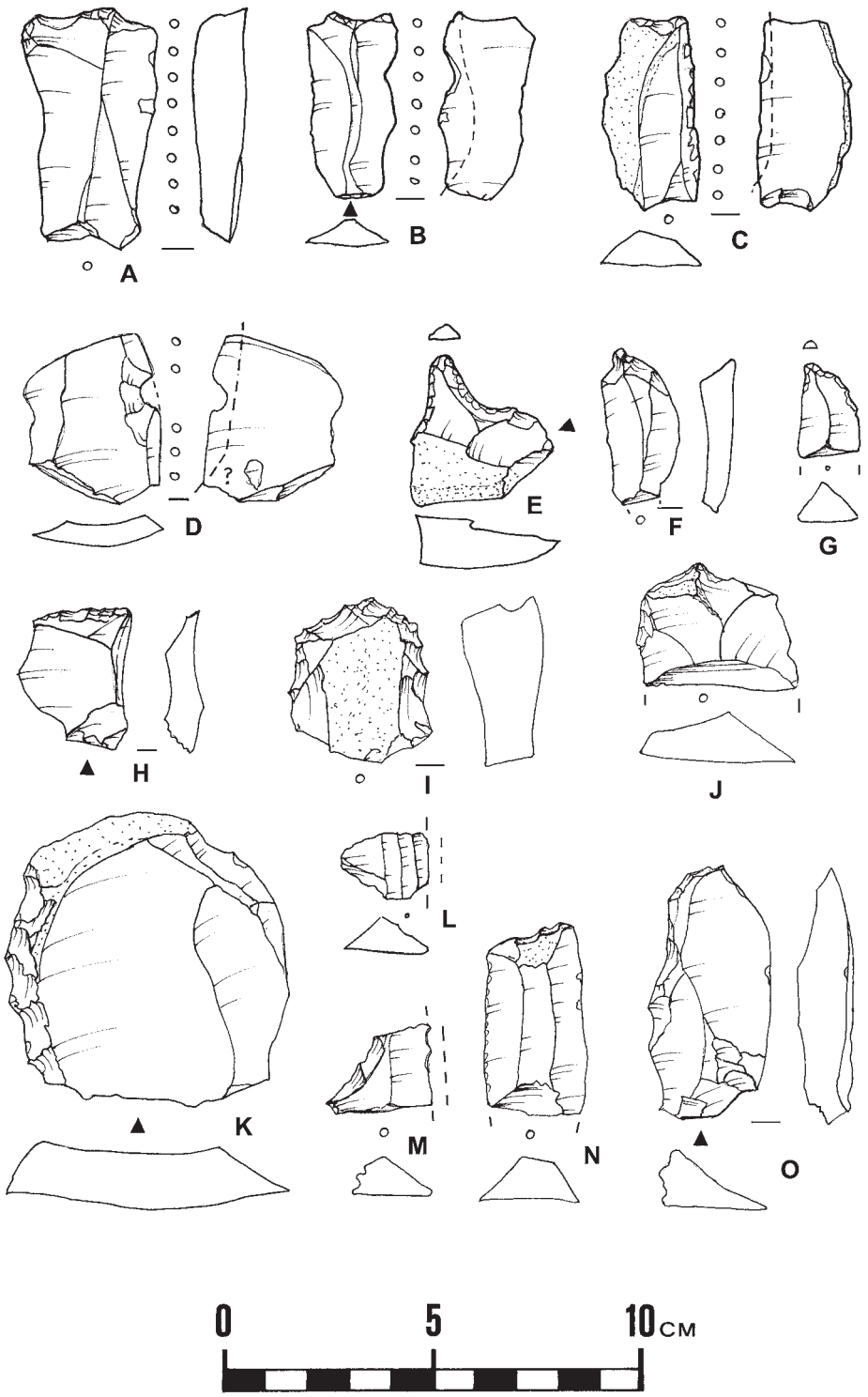


Fig. 23. Flint lithics from various trenches.

Figure 24 descriptions

A. D8 L19 KT2 #1: Blade segment. Edges worn; left edge damaged. Some striations visible. Translucent green obsidian.

B. D5 L5190 KT13 #1: Blade segment. Edges worn; left edge very damaged. Right edge heavily worn or possibly ground which encroaches partly onto the ventral surface. Some striations visible. Translucent green obsidian.

C. D5 L5190 KT23 #1: Blade segment. Retouch on both edges, but left edge damaged. Translucent green obsidian.

D. F1 L1117 KT8 #1: Transverse arrowhead. Segment of blade retouched across break and on side to form a tranchet. Translucent green obsidian.

E. E2 L25 KT18 #1: Segment of a thick blade. Right edge has semi-invasive scale flaking on dorsal surface and abrupt edge retouch on the ventral forming a bevel. Left edge has inverse retouch on distal part. Opaque black slightly coarse obsidian with grey edge.

F. D5 L5190 KT13 #2: Blade segment. Nibbling edge retouch and slightly worn on both edges. Translucent green obsidian.

G. D5 L5169 KT8 #1: Blade segment. Both edges crushed and some flaking on ventral surface. Translucent green obsidian.

H. D5 L5190 KT13 #3: Blade segment. Nibbling edge retouch and slightly worn on both edges. Translucent green obsidian.

I. D5 L5169 KT8 #2: Distal end of blade. Square shaped with slight hinge termination. Some chipping on edges. Translucent green obsidian.

J. D5 L5190 KT13 #1: Écaillé piece. Blade fragment appears to have been struck on an anvil. Translucent brownish- grey obsidian.

K. D8 L19 KT2 #2: Small écaillé piece splintered at both ends. Fairly coarse opaque black obsidian with grey edge.

L. E2 L25 KT18 #2: Core fragment? Small struck lump with multi-directional scars and cortex on two faces. Slightly coarse opaque black obsidian with grey edge.

M. E2 L22 KT4 #1: Écaillé piece. Cortex on back. Splintering at both ends. Slightly coarse opaque black obsidian.

N. E2 L22 KT4 #2: Écaillé piece. Splintering at both ends. Fairly coarse opaque black flint with grey edge.

O. E2 L24 KT2 #1: Core fragment? Small struck lump with multi-directional scars and some step fracturing. Slightly coarse opaque black obsidian with grey edge.

P. E2 L24 KT2 #2: Large flake struck from a changed orientation core. Cortex on dorsal surface and on striking platform. Fairly coarse opaque black obsidian.

Q. E2 L25 KT8 #1: Long narrow early stage flake removing outside curvature of the nodule. Cortex on dorsal surface. Slightly coarse opaque black flint.

R. D5 L5190 KT23 #2: Flake with parallel flake scars. Striking platform plain with slight lip and diffuse bulb of percussion. Black obsidian with grey edge.

S. E2 L24 KT7 #1: Large flake struck from a changed orientation core. Cortex on dorsal surface. Striking platform indeterminate with much step fracturing on edge. Fairly coarse opaque black obsidian.

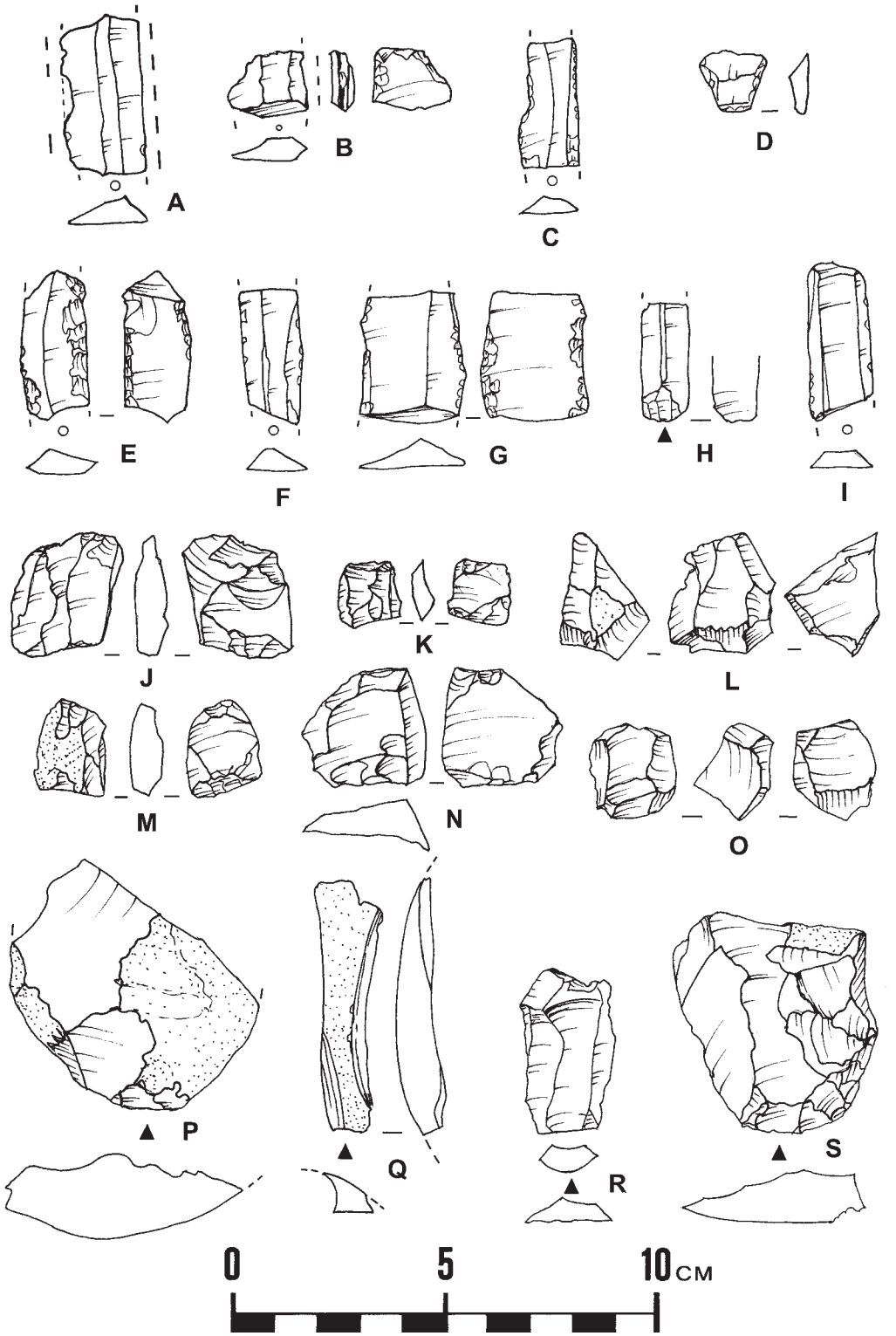


Fig. 24. Obsidian lithics from various trenches.

Figure 25: Obsidian arrowhead (D.5.5190.27) from Ubaid context in trench D5.

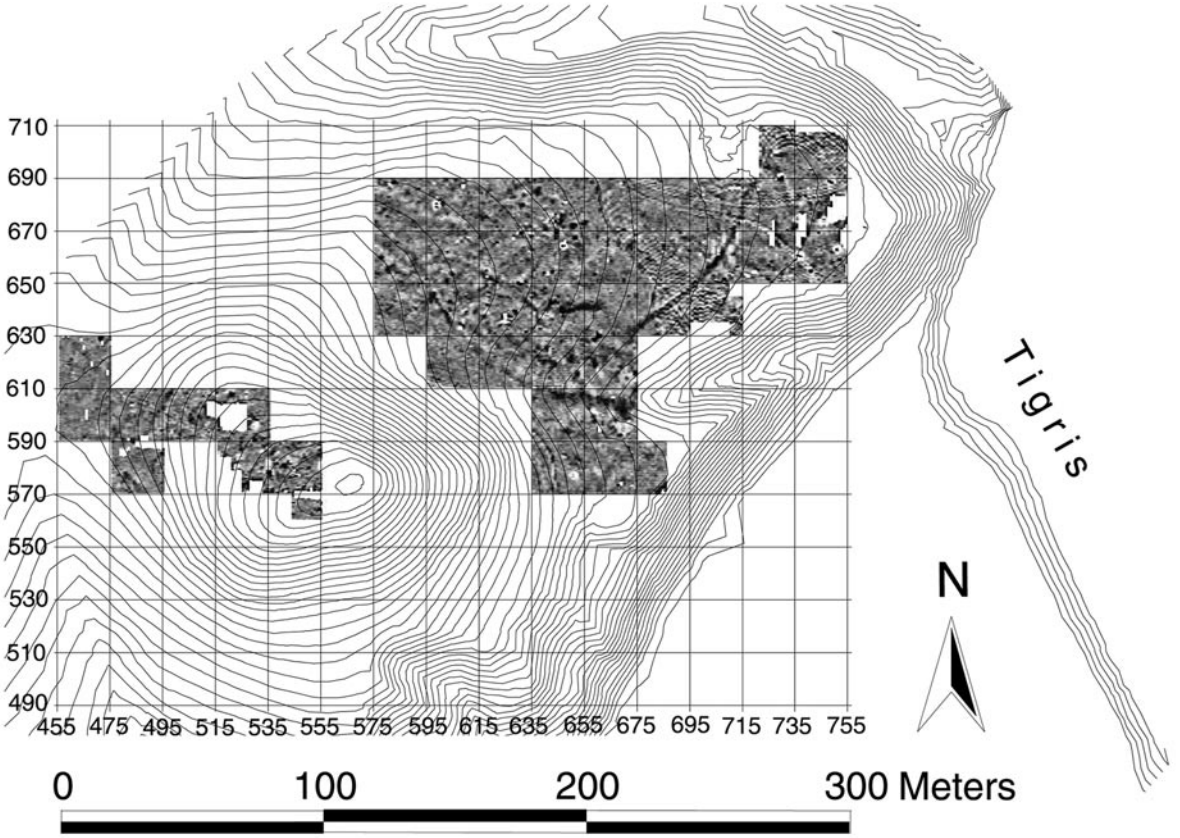


Figure 26: 2004 season remote sensing data in its 20 x 20 meter collection grid superimposed onto the site topographic map.

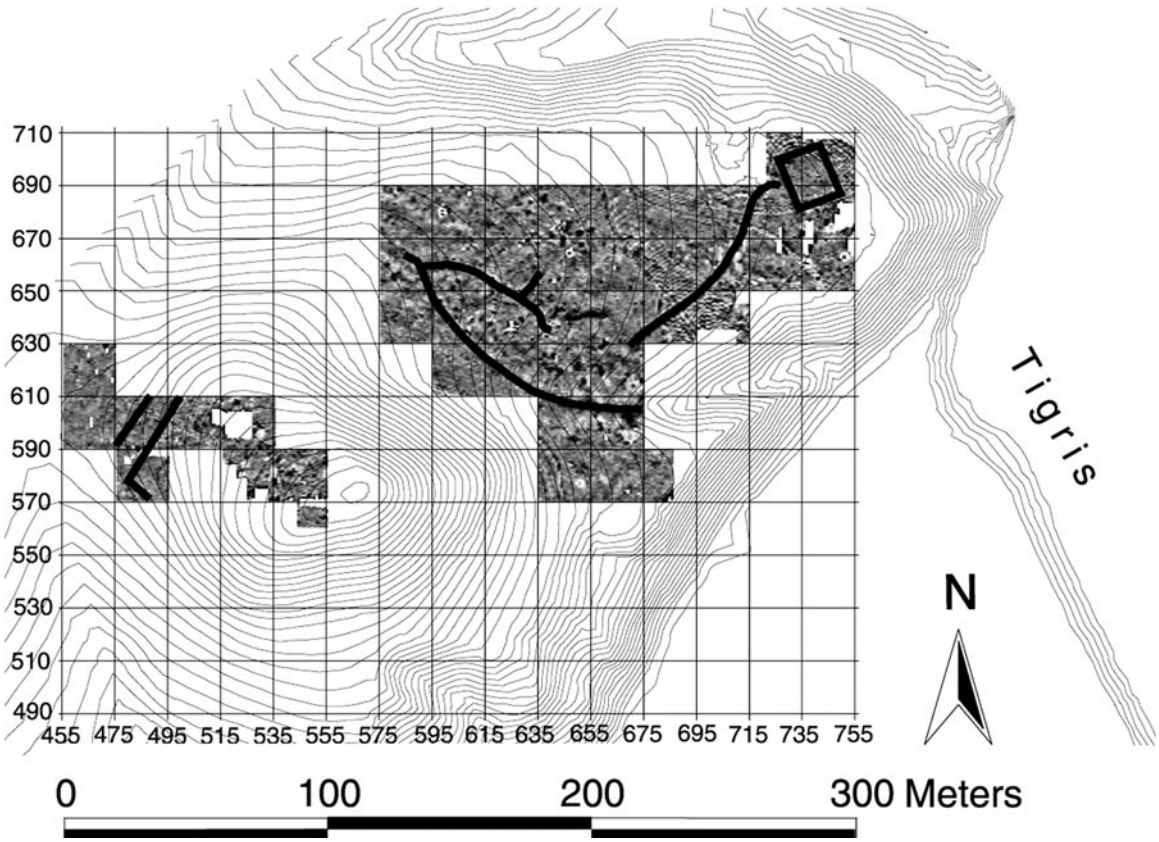


Figure 27: Previous figure with features discussed in the text marked by black lines. Features include: linear and square features in the lower town, and the wall on the western side of the tell. The latter is marked by a line for its outer face, and a line for its inner face where the clay layer to the east contrasts with the wall to the west.

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A PRELIMINARY REPORT OF THE ARCHAEOLOGICAL EXCAVATIONS AT HIRBEMERDON TEPE, SOUTHEASTERN TURKEY, 2005

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1. INTRODUCTION[1]

Hirbemerdon Tepe is located along the west bank of the upper Tigris river valley in southeastern Anatolia (Turkey), about 40 km east of Bismil in the Diyarbakır province (Fig.1). The third season of archaeological work was conducted between July 10th and August 15th 2005,[2] as part of a broader rescue project related to the construction of the Ilısu dam along the Tigris river in Turkey.

Following the completion of the first two years of preliminary studies, the archaeologists were able to define the overall chronology of the site and, through a geophysical survey, a partial orientation of some of the sub-surface structures. The third season aimed to test these preliminary results with two principle objectives: first, to expose a large architectural sector in the High Mound (Area A) belonging to a late Third/first half of the Second Millennium BC local cultural horizon; and second, to perform a sounding in the Outer Town (Area B) for the purpose of obtaining a clear chronological stratigraphy for this specific part of the site.

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[1] We would like to thank the Ministry of Culture and Tourism of Turkey for its support and the permit for our archaeological work at Hirbemerdon Tepe, and, especially, Ms. Nilufer Babacan (Ministry of Culture and Tourism, Ankara) who was our representative in the field and constantly helped us with her overwhelming support during the excavation season.

The project was jointly planned with Necdet Inal (Director of the Museum of Diyarbakır) as part of the Ilısu dam project, and to him goes our warmest acknowledgment.

Our special acknowledgments for the success of the third season of archaeological work at Hirbemerdon Tepe go also to the Italian Embassy of Ankara and to the Consulate of Izmir, to 7. Kolordu Komutanlığı Diyarbakır, to Emniyet Genel Müdürlüğü Yabancılar Şubesi, to Dr. P. Pugsley, to the people of Ahmetli, where we were based, and, most of all, to all the workmen without whom this project would not be possible.

But, our deepest acknowledgments go to Bradley Parker, Director of the UTARP. Without his incredible logistical and scientific support this season would not have been possible.

The project was financially supported by the Italian Ministry of Foreign Affairs, the Istituto Italiano per l'Africa e per l'Oriente, and private donors.

[2] The participants of the third season were: Ms. N. Babacan (representative, Ministry of Culture and Tourism), Mr. S. Valentini (field director, University of Florence), Mr. A. D'Agostino (area supervisor, University of Florence), Ms. F. Gulli (register and illustrator, University of Naples – L'Orientale), Ms. C. Okal (illustrator, University of Diyarbakır), Ms. D. Erdem (archaeologist, Middle East Technical University, Ankara), Ms. U. Devrim (archaeologist and illustrator, Middle East Technical University), Ms. K. Abend (conservator), and Dr. N. Laneri (project director, IsIAO).

Hirbemerdon Tepe has a size of about 10.5 hectares. The highest point of the site is positioned at 610 m above sea level and overlooks the entire valley created by the confluence of the Batman Su and Tigris Rivers. The site is bordered by the bed of the Tigris along the eastern side, while the northern side of Hirbemerdon Tepe has been eroded by a modern irrigation channel. Moreover, this region is separated from the Syrian Jazirah by the Tur 'Abdin mountains (Laneri 2005).

Hirbemerdon Tepe's ancient settlements were built atop a geological formation of a Pliocene continental rock structure that characterizes the entire region (Doyuran, Toprak and Akgün 2001: 848). In addition, the topographical map of the area highlights the importance of the plateau's natural structure in the development of the ancient site. During the first two seasons, the archaeologists were able to distinguish three main areas of occupation (Fig. 2 & 3):

a) the High Mound and its surroundings, which occupy about 4 hectares of the total extension of the site;
b) a flat Outer Town of about 3.5 hectares, which along the southern limit is distinctively separated from the mound by a natural, steep rock formation that in certain sections appears to have been shaped in the form of large steps. The eastern border of the Outer Town is defined by the Tigris, while the northern limit is difficult to define due to a modern *wadi* running west-east;[3]
c) the Lower Town, measuring about 3.0 hectares and located in the north-western section of the site, which is separated from the mound by a natural rock formation.

In terms of chronological phases, the site was probably first occupied during the Late Chalcolithic period (Fourth Millennium BC), which is characterized by a local Chaff-Faced Ware. However, the most important archaeological phase occurred between the late Third to the mid Second Millennium BC and was distinguished by a high presence of the so-called Red Brown Wash Ware (hereinafter RBWW) ceramic assemblage, recognizable throughout the entire site. After a brief period of abandonment, Hirbemerdon Tepe was reoccupied during the Iron Age, and, in a much later period, a final settlement occurred during the Islamic period (for the site's relative chronology see Laneri 2005 and in press a). (NL)

2. The Sounding in the Outer Town (Area B)

The Outer Town was intensively investigated during the first two years of preliminary studies. A group of scientists from the Dokuz Eylül University of Izmir[4] performed a magnetic gradiometer survey with excellent results, including the detection

[3] The steep slope that separates the main mound from the Outer Town is characterized by the presence of numerous caves that were used in ancient times as funerary chambers, and that during modern times have been transformed into dwellings for people and animals. The caves are still visible along this section of the Tigris valley, and are badly eroded probably due to the river's inundations.

[4] The geophysical survey was performed by a team of the Dokuz Eylül University of Izmir directed by Prof. M. Drahor.

of a series of sub-surface architectural features (Laneri in press b). The high density of potsherds along the southern lobe of the Outer Town was the other key factor that convinced the archaeologists to open a 10x10m sounding trench (Area B) in this area (Fig. 3). The sounding aimed to better define the results of the gradiometer survey and to establish a chronological sequence of occupation for this area from the latest occupational period down to the virgin soil. This sequence, once completed, will serve as a comparative yard stick to be used for establishing the chronology of the entire site for the duration of the project.

Through the results obtained from the excavation of the sounding, it has been possible to establish the following four phases of occupation:

Iron Age

This archaeological phase is recognizable only in the western part of the trench. Here two perpendicular walls form a small room. One of these walls has an E-W orientation and is constructed from large-sized stones (Locus 3), while the other is badly preserved and composed of small to medium-sized stones placed on top of another wall belonging to an earlier phase (Locus 10). Due to its vicinity to the plough zone, the room's floor is in very bad condition, and only the remnants of an original pebble-paved floor are still visible. The material culture associated with this floor contains residual elements from earlier periods – mostly Red Brown Wash Ware – as well as objects belonging to a later Iron Age horizon (i.e. a fragmented of Grooved Ware and a spouted vessel, Fig. 4.10-12, see Russell 1980: 86, fig. 18). As a result, it can be assumed that this small section of architecture dates back to the Iron Age period. Furthermore, a potsherd of a deep ceramic bowl (Fig. 4.13) discovered in this area is closely comparable to other vessels coming from the Iron Age levels at Ziyaret Tepe (Matney and Rainville 2005: 58.8), while a fragment of a grooved basalt grinding maul (Fig. 4.14) has clear similarities to other artifacts found in Syro-Anatolian sites dating back to the Iron Age period, such as the sites of Tell Halaf (Oppenheim and Hrouda 1962: taf. 38.c), Sultantepe (Lloyd and Gökçe 1953: pl. 1.1) and probably Boğazköy (Bohemer 1979: taf. 38.3847).[5] The importance of this object is that in later Iron Age periods it develops into a defining element of a much broader cultural and geographic horizon throughout the Eastern Mediterranean area (Frankel 2003). Based on the discovery of a basalt bowl with a ring-base and grooved rim, Hirbemerdon Tepe can also be chronologically linked to the late and post Neo-Assyrian periods (ca. Seventh to Sixth Century BC, for comparisons see Assur, Miglus 1996: taf. 58-59; Khirbet Qasrij, Curtis 1989: fig. 22.31; Tell Ahmar, Green and Hausleiter 2001: 105, fig. 4; Tell Halaf, Hoppenheim and Hrouda 1962: taf. 51.2, 3, 36, taf. 52.34; and Boğazköy, Phrygian levels, Boehmer 1972: taf. LXXXIII. 2190; Bossert 2000: taf. 93.1103, 1104).

[5] Even though these type of mauls are generally dated to the Iron Age period, similar examples are found in Middle Assyrian contexts (cf. Tell Sabi Abyad, Trokay 2000: 1668).

Middle Bronze Age (Sub-phase A)

After exposing the latest archaeological phase of occupation, the archaeologists decided to concentrate their efforts on digging the eastern section of the trench (5x5 m). The western limit of this excavation area is bordered by the wall (Locus 3) that was previously excavated. During its earliest construction phase, this wall was associated with a highly compacted layer of collapsed debris with traces of pebble-paved floor, which probably originally functioned as a pavement to level an external space. The material culture associated with this archaeological phase belongs to a Middle Bronze Age horizon (first half of the Second Millennium BC). This assumption is based on the discovery of RBWW and other potsherds that have close comparisons to other Middle Bronze Age sites of the upper Tigris valley, as well as northern Syria and central/eastern Anatolia (Figs. 6-8). RBWW is a very distinguishable local pottery assemblage, rarely found in other similar archaeological contexts outside of the upper Tigris valley (Parker and Swartz Dodd 2003). It is also important to note that throughout the entire site of Hirbemerdon Tepe the predominant presence of RBWW is striking, especially if this data is compared to other pottery assemblages found at the site.[6] The RBWW assemblage has a distinctive surface treatment characterized by a highly burnished, monochrome or bi-chrome decoration, ranging in color from 'red' (10R 4/6) to 'dusky red' (10R 3/2) and covering either the entire exterior vessel body or only its upper rim-shoulder section (for a preliminary report on the chemical analysis of RBWW, cf. *Paragraph 6*). In terms of clays and tempers, it is possible to differentiate between 'fine' and 'medium to coarse' wares.[7] The first category is usually associated with bowls and beakers (Fig. 5), while the latter is related to larger shapes (mainly storage jars, Figs. 6-7). From among the fine wares, it is possible to define the following shapes and corresponding comparisons: carinated beakers, carinated bowls with a slightly everted rim, globular bowls with a groove below the rim, and bowls with a club-shape rim (cf. Lidar H. Phase 3/2, Kaschau 1999: tav. 345, 4; Kenan Tepe, Parker and Swartz Dodd 2005: 107.K; Arslantepe VA, Di Nocera 1998: tafel 1.6, 14, 22). RBWW coarse ware is instead characterized by holemouth and short necked jars with thickened or grooved rims. This repertoire of storage jars has strong similarities with contemporaneous contexts at other sites along the upper Tigris valley (i.e. Gre Dimse, Krag 1999: 268, fig. 10.14; Kenan Tepe, Parker et al. 2003: 158.j, k; Ziyaret Tepe, Matney 1998: 23.13, 15). In addition to RBWW fragments, this phase is characterized by a few potsherds of Painted Ware (pseudo-Khabur Ware), helpful in connecting this archaeological phase to a specific Middle Bronze Age horizon (ca. 1815-1550 BC, cf. Khabur Ware Period 2-3, Oguchi 1997: 196-199, fig. 1). In the case of the Painted Ware fragments found in the Sounding (Area B), the exterior surfaces are decorated with a red paint applied either as horizontal stripes or vertical wavy lines,

[6] The results obtained during the survey performed in the Outer Town have demonstrated that the percentage of RBWW compare to all other assemblages reaches ca. 70% (Laneri in press b).

[7] The temper used for the RBWW is usually grit and mica with an addition of a low percentage of straw in the case of large storage jars.

which consistently embellish the upper section of the vessel bodies (for horizontal stripes, Fig. 6.4, see Girnavaz MB, Erkanal 1991: R. 1; Imikuşağı MB, Sevin 1987: R.22; Hakkari MB, Özfirat 2002: fig. 4/5; for wavy lines, Fig. 6.5, see Giricano, Schicht 1, Schachner 2002c: 48, abb. 38; Arslantepe VA, Di Nocera 1998: tafel 33.4, 8). [8]

Early Bronze/Middle Bronze Age (Sub-phase B)

Underneath Sub-phase A, the archaeologists discovered an area dedicated to craft manufacturing activities. This interpretation is based on the discovery of numerous small-sized stone nuclei used for making flint tools, as well as slag related to post-firing activities. Together with this discarded material, a few finished objects were found, such as a later type of Canaanean blade and a bronze pin with a pierced rectangle and two hollowed circles at the upper end (Fig. 11). In terms of architectural features, the remains of a few badly preserved walls were brought to light. These narrow walls are constructed of small-sized stones whose function it was to separate the open space into defined areas. The overall architectural structure was founded on top of a thick platform composed of a compacted deposit of pebbles and small-sized stones. This platform was built on top of a stratigraphic layer cut into a yellowish sandy layer that is probably the result of a Tigris river flood that took place during ancient times. Due to the instability of the terrain, the platform functioned as a foundation for the superimposed architectural structure.[9] Furthermore, the discovery of a foundation deposit inside a niche embedded in the stone platform suggests a ritual importance given to the platform's construction by the ancient inhabitants. The deposit consists of a cache of two wedged fine ware globular bowls, both with a ring–base and club-shape rim (Fig. 10).[10] One of the most interesting aspects of this discovery is related to the category of pottery represented by these two bowls: the larger one belongs to the RBWW assemblage, while the smaller one is a Dark Rimmed Orange Bowl (hereinafter DROB) (Fig. 8.1-2). The DROB is a type of bowl with a distinctive dark red dusky colored band along the exterior rim and chronologically belongs to a late Third Millennium BC horizon as demonstrated by comparisons with other late Third Millennium BC (post-Akkadian) examples found at Tell Brak/Nagar (Phase N, Oates et al. 2001: fig. 401.271-275), Tell Mozan/Urkesh (Buccellati and Kelly-Buccellati 2000: 171), Üçtepe (Sevin 1993: R. 16.4), Kavuşan Tepe (Közbe 2004: fig. 19), and Ziyaret Tepe (Matney 1998: 23.5). Numerous additional fragments of DROB were also found in the layers corresponding to this phase. These potsherds are usually associated with the RBWW assemblage,[11] but surprisingly they are never found in association with the Painted Ware (pseudo-Khabur Ware) of the later Sub-phase A. In

[8] For general references on the Khabur Ware and its distribution refer to Frabe 1996, Hamlin 1971, Oguchi 1997, 1998, 1999, and 2003.

[9] This possible interpretation of the platform's function was discussed with by Tim Matney and some other members of the Ziyaret Tepe team during their visit to the site.

[10] Residual analysis on the dirt contained in the smaller vessel will be done in the future.

[11] The RBWW assemblage is not very different from the previous sub-phase (A), and some bowls can be compared to late Third Millennium (post-Akkadian, Phase N) red slipped bowls from Tell Brak (Oates 2001: fig. 418.601, 428.628).

order to better understand the chronology of this phase, the discovery of a Gray Burnished Ware carinated beaker (Fig. 8.6, Middle Bronze Age levels at Lidar H., Kaschau 1999: taf. 113, 135; late Third/early Second Millennium BC Phases F/G at Korucutepe, Griffin 1980: 4, pl. 9H; late Third Millennium BC contexts at Tell Mozan/Urkesh, Kelly-Buccellati 2002: 60) has helped the archaeologists to pair this phase with a late Third/early Second Millennium BC chronological horizon.

Chalcolithic

The earliest phase of occupation in the Outer Town belongs to a local Chalcolithic horizon (ca. first half of the Fourth Millennium BC). This phase is found below a yellowish sandy layer that, as previously mentioned, is a clear indicator of an ancient flood of the Tigris river between the end of the Chalcolithic and the beginning of the site's occupation during the late Third Millennium BC. Due to a lack of time and also the need to reach virgin soil, the archaeologists were able to dig only a portion of the sounding (2x2m). During the excavation of this occupational phase, it was not possible to identify any architectural features. However, traces of an outer surface and a shallow pit were found underneath a thick ashy layer. This archaeological phase is characterized by an overwhelming presence of large potsherds comprised primarily of handmade vessels of the cream-brown Chaff-Faced Ware category (Fig. 8.1-9). The shapes of these vessels are very simple and range from globular bowls with simple rims, to jars with short necks and straight or slightly everted rims. This material is easily comparable to similar objects found in the upper Tigris valley (i.e. Salat Tepe, Ökse et al. 2001: 632-634, fig. 8) and in other Anatolian regions further north and east of Hirbemerdon Tepe (cf. the Keban region, Whallon 1979: 20-22, figs. 10-11; the Muş plain, Rothman 1995: 283-284, fig. 4; the eastern Anatolian provinces of Ağrı, Iğdır, and Van, Marro and Özfirat 2003: 389-390, pl. I-II); but it can also be related to a broader pottery horizon that is comparable to the Amuq E Simple Ware and Amuq F Chaff-Faced Simple Ware assemblages (Braidwood and Braidwood 1960: 180-181, 232-238). Moreover, a high percentage of the vessel fragments found in the Outer Town display traces of burning on the exterior surfaces, which appear to be a clear indicator of a violent fire that probably caused the abandonment of the settlement at the end of this period. In terms of pottery typology, one of the Chaff-Faced Ware globular bowls with patterns of scraping along the rim (Fig. 4.1) can be compared to other vessels found in Chalcolithic contexts in the upper Tigris valley (Salat Tepe, Ökse et al. 2001: 618, fig. 8.2), as well as the Keban region (Lupton 1996: 14, fig. 2:1G). Another important sample is a large bowl (with a simple rim and incised dots, Fig. 4.3) that can be compared to a Middle Chalcolithic example found at Tell Brak (area CH, Oates 1985: 183, fig. 2.23). In addition, a deep bowl with straight walls (Fig. 4.3) has similarities with an analogous object found at Tilkitepe (Phase II, Korfmann 1982: abb. 5.6). The jars with a short neck and straight rim (Fig. 4.6) have more comparable examples belonging to a local Chalcolithic horizon in the upper Tigris valley (Gre Dimse, Karg 1999: 267, fig. 9.1), while the jars with short necks and slightly everted rims (Fig. 4.4-5) can be easily dated to a Chalcolithic horizon thanks to clear parallels with other examples discovered at Salat Tepe (Ökse et al. 2001: 619, fig. 9.42), Gre

Dimse (Karg 1999: 266, fig. 8.5), Hazine Tepe (Marro and Özfirat 2003: Pl.II.3), Hacınebi (Pollock-Coursey 1995: 140-141, F, B; Stein et al. 1998: 189, tab. 16.O), Yarim Höyük (Közbe and Rothman 2005: 135, fig. 8.1-3), and Korocutepe (van Loon 1978: pl. 103. 4).[12] Two complete beakers with an S profile and flat base were found in the shallow pit (Fig. 4.7 & 12).[13] This object is a remainder of other beakers found within a late Chalcolithic horizon at Norşuntepe (Hauptmann 1982: pl. 37.8) and at Tepecik (Esin 1982: pl. 72.18) in the Keban region, as well as an example found in the Chalcolithic layers at Giricano in the upper Tigris valley (Schachner 2002c: 55, abb. 45.J).[14] (AD)

3. The High Mound (Area A)

During the first preliminary survey, the archaeologists were able to define the edges of several walls visible along the surface of the High Mound. It is for this reason that scientists from the Dokuz Eylül University of Izmir undertook the magnetic gradiometer survey in 2004 of a small area of the High Mound (Laneri in press b). These studies successfully detected the outlines of anomalies that are related to perpendicular limestone walls or foundations of architectural features that follow a SW-NE and a SE-NW direction.

As a consequence, the archaeologists decided to investigate an area along the western limit of the magnetic gradiometer survey through the opening of a 20x20 m excavation area (Area A, Fig. 3). After a week of excavation, it became clear that a thick layer of collapsed material (mostly large-sized stones) covered most of the eastern section of this excavation area. Thus, it was decided to reduce the working trench by 10 meters on the eastern side and to enlarge it for another 10 meters towards the SW in order to follow the anomalies detected during the magnetic gradiometer survey. The results in this section of the High Mound were more fruitful, and a first layer of architectural structures was brought to light.

This archaeological phase is badly disturbed and no associated floors were available. In terms of chronology, it is very difficult to date these structures; but due to the fact that later pits cut into some of the walls, it is possible to use the material found in the pit fillings as *terminus ante quem*.[15] These pits are characterized by local Iron Age material (first half of the First Millennium BC) associated with residue material from earlier phases, mostly RBWW. The Iron Age period is exemplified by the following

[12] It is also important to notice that this last type of jar includes a very wide chronological (ca. 4000-3200 BC) and geographical range that encompasses from the Hatay plain to the lake Urmia region (i.e. Hammam et-Turkmann VA, Akkermans 1988: 335, pl. 86.210, 102.571, 103.62, 103.67; Tell Leilan V, Schwartz 1988: 143, fig. 6014; Amuq F, Braidwood & Braidwood 1960: 236, 239 , fig. 176.6, 18, 179.22; Keban, Lupton 1996: 14, fig. 2.1: O; Urmia region, Pecorella & Salvini 1984: 287,289, fig. 78b.86, 87, fig. 81.26, 30). Moreover, a similar vessel was found at Tell Brak and dates to the 'early centuries of 4th millennium' (Matthews 2003: 82, fig. 4.20.7).

[13] A fragment of obsidian was found inside one of these beakers (Fig. 12).

[14] It is important to notice possible similarities with a similar example found at Kurban Höyük (Algaze 1990: pl. 28D).

[15] This badly preserved architectural phase is stratigraphically followed by the collapsed debris that are associated with the abandonment of building of the Second millennium BC. In this case it is possible to use this data as *terminus post quem*.

examples: jars with painted triangles, small holemouth jars slightly burnished on the exterior, a fragment of a spouted jar, and a small Plain Simple Ware jar with a knobbed decoration along the rim. All these types have clear comparisons both from this region as well as from nearby areas. For example, the spouted jar can be compared to a similar vessel found at Giricano (Schachner 2002c: abb.14.e), while the knobbed decoration is reminiscent of another fragment belonging to a local Iron Age horizon found at Tell Jhash in the upper Khabur valley in Syria, not far from the modern Syrian-Turkish border (Anastasio 1999: fig. 5.d). In addition, the painted jar found inside one of these pits (Locus 50, Fig. 13) belongs to a local Iron Age horizon, which is frequently uncovered in other archaeological contexts within the upper Tigris valley (Salat Tepe, Ökse and Alp 2002: fig. 16; Giricano, Schachner 2002c: abb. 15.a-b).[16]

The stratigraphically subsequent layer is characterized by a thick layer of collapsed debris (i.e. mostly mud-bricks), and by the constant presence of RBWW type potsherds. It is important to notice that a few fragments of so-called 'late' Khabur (Nuzi) Ware were found (ca. 1550-1400 BC, Fig. 6.6-7) among the pottery associated with this layer (Oguchi 1997: 196-199).

Underneath this thick layer of collapsed debris, the archaeologists brought to light a large architectural structure. The whole complex was planned following a NW-SE axis and is probably characterized by a series of terraces that served as levelers for the natural slope of the hill. Due to the presence of double-walls separating clusters of rooms, the entire complex was possibly subdivided into several agglutinated sections (Buildings A-G) (Fig. 18). The overall architectural plan of this complex was centered on a staircase (Building B, rooms 4-5-6) comprised of flat limestone slabs that functioned as a link between two different terraces on which the whole building was founded (i.e. in respect to Building A, Building B is located at a lower level, Figs. 18-20). Along the northeastern and southwestern sides of the staircase, numerous small, rectangular-shaped rooms are connected through doors and outer alleyways. In some cases the connecting doors are in alignment with each other. It is important to highlight that most of the rooms are characterized by the presence of benches constructed from mid-sized stones, positioned along the inner walls. Based on the presence of numerous fragmented mud-bricks in the previously mentioned layer of collapsed debris, it can be assumed that the complex was probably constructed using a building technique that incorporated a first layer of mid-sized stone walls with a superimposed layer of mud-bricks. Drawing on this initial archaeological data, it also can be stated that the external courtyards were stone-paved, while the other internal rooms contained compacted clay floors (comprised of mid-sized limestones to large river pebbles). In some of the rooms the doors have both internal and external niches as well as recesses (i.e. Buildings D-F).[17]

[16] It is interesting to notice that none of these jars have been found associated with floors, but they were constantly found during survey on in refusal pits (see Schachner 2002c: abb. 7).

[17] The construction technique of this complex has strong similarities with numerous southeastern Anatolian sites that belong to a comparable chronological horizon (i.e. the Middle Bronze Age building found at Girnivaz, Erkanal 1991: R.1).

Due to the site's natural formation and a high percentage of rainfall, the water drainage system appears to have been one of the most important architectural elements within the overall planning of the complex. One key component of this system is a drainage channel (Building B, room 4) built between the external wall of a room dedicated to working activities (Building A, room 3) and the southwestern side of the main staircase (Building B, room 6, Fig. 20). In this case room 3 was connected to the main drainage system through a hole reserved within the wall (Fig. 18). This type of drainage system has comparable examples dating to both the Middle Bronze (e.g. the site of Imamoğlu along the upper Euphrates valley, Uzunuğlu 1985: R.7-8) and more recent periods, such as those used in numerous Tur 'Abdin area villages near the modern Turkey-Syria border (i.e. Midyat in the Mardin province).

In terms of the complex's chronological framework, the archaeologists were able to define two sub-phases of occupation that can easily be related to those highlighted during the excavation of Area B; that of the Middle Bronze Age, *Sub-phase A*, and the Early Bronze/Middle Bronze Age, *Sub-phase B*. This later phase of occupation (Sub-phase A) is distinguishable by modifications carried out on some sections of the Area A complex, including the blocking of several doors built during the earlier period and the reduction in size of some of the rooms. This latter architectural transformation was performed through the use of dividing walls that were built on top of the floors of the earlier occupational phase (i.e. rooms 10/11, Building C and 16/17, Building E, Fig. 18).

During both sub-phases the function of the rooms seems to have been predominantly dedicated to the processing and storage of food, as is demonstrated by the high number of storage and cooking jars, as well as grinding stones and mortars found *in situ* (i.e. Building A, Fig. 19). The pottery containers were probably originally located on the benches, and only the collapsing and subsequent sliding movement of the surrounding dirt transported them to a more central position. The discovery of a thick layer of burnt material associated with a curved wall supports the interpretation that one of the rooms (10/11, Building C, Fig. 18) was probably dedicated to working activities connected with the use of fire. As indicated by the discovery of stone mortars, two small rooms (14 and 15, Building D, Fig. 18) located along the outer alleyway in the NE section were used to grind and process food.

From among the material culture found inside the rooms, the most common represented form is ceramic vessels. But together with the pottery, a high number of basalt grinding stones, limestone mortars, stone pestles, and terracotta portable hearths were also discovered. Within the overall assemblage, the presence of decorated portable hearths (Figs. 9 & 16-17) can be interpreted both as part of the rooms' function and as evidence of ritual activities performed by individuals in some rooms of the Area A complex (see Paragraph 5). Furthermore, in one of these rooms (court 12, Building D) the archaeologists discovered a tripartite ceramic basin (Fig. 14) laying nearby a the portable hearths decorated with anthropomorphic motifs. This object further emphasizes the possible ritualistic function of this section of the building, and, due to a possible comparison with a similar object found in the pre-Mitanni levels at Nuzi (Starr 1939: 405, pl. 95.a), helps the

archaeologists in determining chronological links with the northern Mesopotamia regions between the late Third and the first half of the Second Millennium BC.

In terms of pottery analysis, the Area A architectural complex reflects what has been found throughout the entire site and is mainly characterized by the production of pottery vessels belonging to the so-called Red Brown Wash Ware (RBWW) assemblage (Figs. 5-7). Even though the archaeologists were able to define two occupational sub-phases, it is very difficult to differentiate chronological phases within RBWW pottery production. An earlier phase of pottery production (Sub-phase B) seems to be characterized by hemispherical bowls with flattened rims that have an incurved blunt and club-shape. In some cases a groove is visible along the exterior surface of these vessels just below the rim (Fig. 5.13). This pottery category is usually associated with Dark-Rimmed Orange Bowls (Fig. 8.3), Gray Burnished Ware (Fig. 8.5), and, in one case, a complete profile of a fine ware bowl with a beaded rim (Fig. 8.4). Although these shapes are only rarely represented at Hirbemerdon Tepe, they are comparable to other assemblages from a wide range of sites with material culture dating to the late Third Millennium BC. For example, this is demonstrated by the case of Tell Brak/Nagar in the Syrian Khabur valley, where similar shapes are associated with the site's post-Akkadian phase of occupation (Phase N: Oates et al. 2001: 161-163, figs. 401.271-275, 415.526). As already mentioned in the paragraph dedicated to the Sounding in Area B (see *Paragraph 2*), other possible comparisons for this specific assemblage are related to other sites of the Khabur valley (Tell Mozan/Urkesh), as well as settlements of the late Third Millennium BC along the upper Tigris valley (Üçtepe, Kavuşan Tepe, and Ziyaret Tepe).

The later occupational phase (Sub-phase A) of the Area A complex is characterized by an increased presence of vessels with carinated shapes – i.e. bowls and beakers – and large storage jars (Figs. 5.1-3, 6.2, & 7.4-7). Even though these RBWW forms are also present in the earlier occupational phase, the bowls of the later RBWW assemblage are definable by a clearer carination along the vessel shoulder. From among the carinated vessels, beakers with slightly everted rims appear as a constant marker for this specific phase. These also have a distinctive 3-groove decoration along the outer surface, just below the carination.

Due to the functional context of this later archaeological phase, the range of vessel shapes of the RBWW found in the architectural complex is varied, but with a predominance of large storage jars. These usually have an open or holemouth with either rounded, externally thickened rims or, in fewer cases, highly decorated ones (Fig. 7.2). Another characteristic of RBWW storage jars is represented by the presence of bands applied around the central part of the vessel body's exterior surface, or by a wavy incised decoration on the upper exterior section (Fig.6.8-13).[18] These types of pottery have strong similarities to those discovered at other upper Tigris valley Middle Bronze Age sites (Parker et al. 2003: fig. 9G-I; Parker and Swartz Dodd 2003: fig. 5T, 8L; Schachner 2002c: abb.33, 34.a, 35.b, d-e). But some of the shapes and decorative motifs also have

[18] In a few cases this incised decoration is based on half-moon or full-circle motifs made with reed tools (Fig. 6.13).

comparisons with material from other neighboring regions, such as northern Syria and the upper Euphrates valley (for good comparisons see Nigro 1998).[19]

The discovery of a few potsherds of painted pottery (pseudo-Khabur Ware, Fig. 6.3) and of Gray Burnished Ware are particularly helpful in better defining the relative chronology of the architectural complex (cf. ibid. 1998: 273-274; Oguchi 1997). This can be done through a close comparison of these potsherds with similar material discovered in other Near Eastern contexts of the first half of the Second Millennium BC that are historically embedded in the Old Assyrian period (Parker and Swartz Dodd 2003: 42-64). In addition, the carinated bowls and beakers belong to a much wider cultural phenomenon that strongly distinguish Middle Bronze Age horizons of northern Mesopotamia, Syria, and Anatolia (Nigro 1998: 289). This Middle Bronze Age ceramic production is directly linked to a wider network of cultural and economic exchanges highlighted by an increase in the number of written texts throughout the entire Syro-Anatolian and Mesopotamian area. But, as can be seen at Hirbemerdon Tepe, local traditions have revised the global ecumene. In the case of pottery production the local traditions are more evident as differences in surface treatment as well as in the use of clay tempers.

Another example of local ceramic production at Hirbemerdon Tepe includes decorated lids (Figs. 8.10-13 & 15). The peculiarity of these objects is related to unusual types of decoration that include concentric circles, bull-shaped handles, incised zig-zag decorations, and other in-relief embellishments (for possible comparisons cf. Tepecik, Esin 1970: pl. 14; Norşuntepe, Hauptmann 1972: pl. 75.9; Çattepe survey, Velibeyoglu 2002: fig. 42.4; Lidar H. Phase 3, Kaschau 1999: taf. 90, 6; Tell Brak, Ninivite V period, Oates et al. 2001: fig. 468: 1713-1715). Some of these lids belong to the RBWW horizon, while others are associated with jars of the Cooking Ware type.

In fact, within the Area A complex, the Cooking Ware represents another category of pottery usually coupled with RBWW.[20] This type of pottery is characterized by jars with distinctive globular shapes, short necks, rounded rims, and triangular lugs attached to the rim area (Fig. 7.8-9). The clay is very coarse with mica and chaff temper, the color is 'weak red' (10R 4/3) and the surface is burnished. Through the presence of the Cooking Ware jars with triangular lugs, it is possible for the archaeologists to link Hirbemerdon Tepe production with late Third and early Second Millennium BC contexts in northern Syria and eastern Anatolia (Norşuntepe, Hauptmann 1972: pl. 72.2; Kurban H. IV, Algaze 1990: pl. 93.A-B,I-J; Salat Tepe, Ökse 1999: fig. 4, Ökse et al. 2001: fig. 7.1; Giricano, Schicht 01, Schachner 2002c: abb.12.2; Lidar H., Phase 1-3, Kaschau 1999: abb. 42, KT 4; Tell Brak, Ninivite V period, Oates et al. 2001: fig. 466. 1676-1677; Tell Mozan,

[19] In the case of the 'wavy incised' decoration found at Hirbemerdon Tepe, the available comparisons are with a long-term decorative tradition that was used by potters in Syria and southeastern Anatolia during the end of the Third and first half of the second Millennium BC (cf. Algaze 1990: pls. 114.F,G, 121.A, E-J, Nigro 1998: figs. 3.6, 4.6, 6.9). But, it is also important to notice that the incised decoration at Hirbemerdon Tepe is based on one simple incised line, while in the other sites it is a combed incision.

[20] During both occupational sub-phases of Area A complex the Cooking Ware is constantly associated with storage jars of the RBWW.

Buccellati and Kelly-Buccellati 1988: fig. 21.M1 20; Tell Chuera, Kühne 1976: abb. 383-395; Tell Es-Sweyhat, Holland 2006: Pl. 275.3,6-7).

In summary, the overwhelming discovery of material culture in the Area A complex clearly supports a relative chronology for the occupation of the complex thanks to the presence of certain types of ceramic vessels that can be easily related to both indigenous and exogenous examples. More specifically, the overall occupation of the complex should correspond to a chronological phase that begins sometime during the late Third Millennium BC (i.e. post-Akkadian period) and ends during the mid Second Millennium BC (i.e. beginning of the Mitanni period). (NL & SV)

4. Chronology of the Area A architectural complex (Sub-phase A)

During the 2005 field season, a total of three wood charcoal samples were collected from within the layers belonging to *Sub-phase A* of the Area A architectural complex. Two of them (HM05-C14-01 and HM05-C14-03) were sampled from Room 10 of Building C on top of a compacted floor from sub-phase A, and appear to be the remnants of roof beams. The third sample (HM05-C14-02) was collected from Room 15 of Building D. Due to the reduced size of the latter one, only the first two samples were processed by the Geochron laboratory in Cambridge Massachusetts using conventional (non-AMS) dating techniques, and the raw dates were calibrated using the CALIB 5.0.1 calibration program (Stuiver and Reimer 1993). The dates (Table 1) are fairly consistent with each other. Sample # HM05-C14-03 was smaller than HM05-C14-01 and was counted with an extended period of time by Geochron and had a wider age range. The dates were corrected for isotopic fractionation and the $\delta^{13}C$ values were consistent with the materials analyzed (Stuiver and Ploach 1977).

The two calibrated dates fall within the Middle Bronze Age time period and are consistent with the dates of the associated pottery from these contexts (Laneri in press). Further support in terms of absolute chronology at Hirbemerdon Tepe comes from the C14 calibrated dates (2SD) now available from Kenan Tepe that is another site with Middle Bronze Age levels located in the Upper Tigris Valley. These radiocarbon dates suggest a chronological range of this assemblage from ca. 1960 to 1630 BC (Parker and Swartz Dodd 2003: tab. 2-3).

Obviously, these dates and the comparisons of diagnostic pottery will also help in determining the exact period of occupation of the entire complex discovered in Area A. Further calibrated radiocarbon dates and archaeological data from Area A architectural complex will strongly support the work of the archaeologists in outlining the role played by Hirbemerdon Tepe in the wider historical and geographical environment of the late Third and mid Second Millennium BC. (MS)

5. PORTABLE HEARTHS FROM THE AREA A ARCHITECTURAL COMPLEX

During the excavation of the Area A architectural complex, a total of four portable hearths were uncovered. Of these low-fired ceramic objects, two are small fragments, while the remaining two are in a very good state of preservation and can be described as follows:

1. This portable hearth (Fig. 9.3 & 16) was found in the court 3 of Building A next to two stone mortars and a grinding stone. This hearth is complete, semi-circular in shape, and is embellished with incised decorations along the vertical elements framing the front-facing side. The object is comprised of two levels with a shallow, spouted upper receptacle, and a lower enclosed interior space accessible only from the front opening. The edge of the upper receptacle is embellished with three inlaid pebbles evenly spaced around the perimeter (one on each front corner and one on the center back edge). The incised decorations on each of the front-facing vertical elements are fishbone in pattern and surmounted by a series of horizontal incised lines and dots that recall stylized anthropomorphic motifs. Traces of burning are visible on the inside walls of the lower interior space, including the underside of the upper receptacle; as a result, it can be suggested that this object was definitely associated with firing activities.[21]
2. The second object (Fig. 9.1 & 17) was found on top of the stone-paved floor of court 12 in Building D. Its identification is more difficult because it has only a few parallels, was found in a secondary context, and is a fragment of a larger low-fired ceramic hearth stand or a stand to support a portable hearth. The object is rectangular in shape, vertical in orientation, and tapers down to a narrower bottom end. Each of its four faces is decorated with different incised and relieved schematic anthropomorphic motifs. Even though the top and the bottom surfaces are badly preserved, they exhibit clear traces of burning associated with firing activities. Areas of loss are visible at the four corners of the narrower bottom surface; this damage has been interpreted by the archaeologists to indicate the loss of four original supporting legs. The recessed cavity of the upper surface functioned as the area used for the hearth's firing activities.

Despite some differences, these two objects can be paired with other examples coming from Third and early Second Millennium BC contexts in the Syro-Anatolian region. They belong to a wide category of fire-related objects that scholars have labeled as movable/portable hearths, hearth stands, andirons, fenders, and/or pot-stands (Kelly-Buccellati 2002 & 2004; Smogorzewska 2004; Takaoğlu 2000). Through her study of the hearths found at Tell Mozan/Urkesh, Kelly-Buccellati (2004: 70) distinguishes at least

[21] Another two fragments of similar objects were found within Area A architectural complex. One of these is characterized by an incised snake-like decoration along the front side, which is a typical late Third Millennium BC decorative motif (Fig. 9.2).

two categories of portable hearths; 'fixed horseshoe-shaped hearths' and 'smaller portable andirons.'[22]

According to stratigraphic relationships at other sites, these kind of objects are usually associated with a specific type of pottery assemblage – the so-called Red-Black Burnished Ware – belonging to the Early Transcausian Culture (ETC) horizon, which has been used to define nomadic and transhumant groups that continuously moved between northeastern Anatolia, the Syro-Anatolian region, and Palestine (cf. Khirbet Kerak Culture) during the Early Bronze Age (cf. Third Millennium BC, Takaoğlu 2000: 11; Smogorzewska 2004: note 2). In fact, as highlighted by several scholars, cultural exchanges between the Highlands and northern Syrian region have a long-term tradition that dates back to sometime during the Third Millennium BC and continued on throughout the first half of the Second Millennium BC (cf. Sagona 2000: 336-340; Kelly-Buccellati 2002: 60 & 2004: 71-74).[23] Therefore, the andirons/portable hearths, as well as other material culture associated with northeastern Anatolian nomadic/transhumant groups, can significantly contribute to the interpretation of the role played by these groups in shaping Ancient Near Eastern complex societies during the Third and the first half of the Second Millennium BC.

More specifically, from both a decorative and typological point of view, one of the Hirbemerdon Tepe portable hearths (1) is most similar to two horseshoe-shaped hearths discovered in one of the 'Khabur period houses' at Tell Mozan/Urkesh (early Second Millennium BC, ibid. 2004: 71-73, figs. 1-3, 6.2-3). This object's schematic incised anthropomorphic motifs are also comparable to another portable hearth found at Cinis Höyük (Takaoğlu 2000: fig. 2a), as well as other hearths discovered at Beth Shan (Palestine), Tabara el-Akrad (Amuq region), and Shengavit (Armenia) (Takaoğlu 2000: 11-13).

Although it is more difficult to establish parallels to the second object here considered – the stand for a portable hearth (2) – it can be included among the hearth stands that, according to Smogorzewska (2004: 157-158), can either have a spool or a prism-like shape. These kinds of objects are usually characterized by perforations that probably allowed for the insertion of filaments necessary for carrying.[24] In terms of the decorative elements, it is quite astonishing to notice the similarities between the Hirbemerdon Tepe piece and the relieved decoration generally associated with the Black Burnished Ware of the mid Third Millennium BC levels at Pulur (Rooms 79-80, Level X,

[22] In 1969, Diamant and Rutter (1969: 147) were already able to embed these fire related objects within the three following categories: 1. horned altars; 2. pot-stands or andirons; 3. loom stands, pot-supports or spit-supports.

[23] The geographical distribution of these andirons and portable hearths is very wide and includes an area encompassing eastern Anatolia, the Amuq region, the Euphrates valley, the upper Tigris valley, western and northern Syria, and Palestine (Takaoğlu 2000; Smogorzewska 2004).

[24] Among these objects, it is important to mention two portable hearts decorated with anthropomorphic designs that were found in mid Third Millennium contexts at Pulur (Keban region, Koşai 1976: 32), and at Aïvan Kale (Sagona 1984: fig. 135: 6).

Koşay 1976: 48-49 & 83-85).[25] Furthermore, Pulur's decorated Black Burnished Ware is usually coupled with anthropomorphic decorated andirons; as a consequence, Pulur's field director interpreted these rooms as part of an area associated with 'domestic ritual activities' (Koşai 1976: 145-148). Following this hypothesis, archaeologists have started to interpret the andirons/portable hearths as objects with ritualistic properties but often coupled with domestic activities (Amiran 1989; Kelly-Buccellati 2004; Smogorzewska 2004; Takaoğlu 2000).[26]

To summarize this data, the portable hearths discovered at Hirbemerdon Tepe seem to be linked to the storing and working functions of the rooms in the Area A architectural complex. This contextual data is in contrast to the contexts in which andirons/portable hearths are generally found in Syro-Anatolian sites dating to the Third and early Second Millennium BC. In addition, the discovery of these objects further highlights the important role played by Hirbemerdon Tepe in connecting the eastern Anatolian communities with those living in northern Syria between the late Third and mid Second Millennium BC. (SV)

6. Chemical analyses of a sample of Red Brown Wash Ware

As mentioned before, the RBWW assemblage has a very characteristic surface treatment, generally visible as bi-chrome variations of red and blackish (dusky red) coloration along the exterior surfaces.

In order to understand the chemical properties of this technique, two samples of the RBWW assemblage were analyzed by the CNR – Institute of Biostructure and Bioimaging of Catania (Italy) using the following non-destructive analytical methods:[27]

- Proton Induced X-Ray Emission Spectroscopy (PIXE),
- X-Ray Diffraction (XRD),
- X-Ray Fluorescence Spectroscopy (XRF).

For comparative purposes, the surface treatment of RBWW samples was compared to the well-understood technology of Attic Black-figure vases. Results indicate that the RBWW samples have a higher concentration of aluminum (Al), potassium (K), and iron (Fe) and a lower presence of calcium (Ca) as compared to the Attic Black-figures vases. These differences are the result of the environments in which the ceramic was fired: a reducing environment for the RBWW versus an oxidizing environment for the Attic Black-figure vases.

[25] A prototype of this anthropomorphic motif can be found in an impressed decoration of a potsherd belonging to Phase G at the site of Judaidah in the Amuq plain (Braidwood & Braidwood 1960: fig. 236).

[26] It is important to notice that these authors have considered these objects as ritualistic elements of domestic activities due to their anthropomorphic decorative pattern (Kelly Buccellati 2004: 76-79), and to later Hittites documents and ethnographic parallels with modern Anatolian transhumant groups (Smogorzewska 2004: 152).

[27] *PIXE-alfa* for the analysis concerning the superficial pigments, XRD to identify the mineralogical phases, XRF to analyze the trace elements of the ceramic body.

The preliminary results of this first analysis of a few samples of RBWW can be summarized as follows:

a) the red and blackish (dusky red) pigments of all analyzed samples have the same chemical composition;
b) these pigments show a high concentration of hematite/Iron (Fe), silicone (Si), aluminum (Al), and potassium (K).

The surface treatment of the analyzed RBWW samples therefore seems to contain a high percentage of either red iron oxide or an iron oxide-based purified clay (wash-slip). The transformation of the color from red to dusky red is due to the firing of the ceramic in a reducing environment. However, it is still unclear whether or not the bichrome effect is due to the intentional application of layers of wash followed by purposeful firing, or rather just a result of random unevenness in the level of oxygen during the firing process.

Despite the importance of these first results, it is important to emphasize that this analytical study is preliminary and only a larger sample will allow for a more conclusive interpretation of the RBWW's surface treatment. (NL & GP)

7. Conclusions

The initial 2005 season of archaeological excavation at Hirbemerdon Tepe has brought to light material culture related to an archaeological phase dating from the late Third to the mid Second Millennium BC. Although of great importance for the history of the Ancient Near East, this period is still vaguely known by Near Eastern scholars. In fact, although the increased numbers of archaeological activities along the Tigris river in southeastern Anatolia have resulted in the discovery of numerous structures associated with the material culture of this chronological period, it has not been clearly linked to other contemporaneous phases within a broader Ancient Near Eastern historical scenario. For this reason, the archaeological assemblages found at Hirbemerdon Tepe can be of fundamental value for future research in this direction. This notion is supported by the discovery of overwhelming data in the Area A architectural complex. This data corresponds to the predominance of a distinctive local ceramic production, the so-called Red Brown Wash Ware, consistently associated with materials similar to those available from contemporaneous periods in northern Mesopotamia and Syria, such as a Fine Ware bowl with a beaded rim, Gray Burnished Ware, and Painted Ware (Pseudo-Khabur Ware). Moreover, several elements of this local production recall examples available from Third Millennium BC contexts in central and northeastern Anatolia, such as the presence of decorated portable hearths (Kelly-Buccellati 2004 and 2005) as well as the construction techniques evident in the Area A architectural complex.

With this geographical and chronological framework in mind, the site of Hirbemerdon Tepe clearly represents an example of an ancient local settlement that played a fundamental role in connecting the northern Mesopotamian communities to those living in central and northern Anatolia, primarily during late Third and first half of the Second Millennium BC. It is important to keep in mind that this archaeological phase

corresponds to the earliest known evidence of the presence of Hurrian groups in the Near East in the form of written documents, in which the location of Hurrian speaking people is described as the 'ancient land of Subartu' (Wilhelm 1989: 7-15). This 'ancient land' refers to a vast area that today encompasses southeastern Turkey and parts of northern Syria and northwestern Iran (Salvini 2000; Steinkeller 1997). Furthermore, the early Second Millennium BC is also characterized by the establishment of a long-distance commercial network that was organized by Assyrian merchants in order to link Mesopotamian regions with central Anatolian centers and sources for raw materials (Eidem 2000; Oguchi 1999).[28] It is for these reasons that the region of the upper Tigris valley appears to us as an interesting cultural and geographical niche that was pivotal in linking communities of the northern and southern regions of the Ancient Near East between the late Third and the mid Second Millennium BC.

In conclusion, the archaeological investigations at the site of Hirbemerdon Tepe will probably support the analysis and interpretation of such an important period, as well as help archaeologists and historians in investigating the apparent cultural interactions that took place between the Mesopotamian and Anatolian regions during the above-mentioned period. An additional objective of this overview is to bring to a wider audience the material culture of this relatively little known but highly significant region of the Ancient Near East.

[28] As correctly pointed out by Burney (1997: 178), in the Third Millennium BC 'Hurrians may well have penetrated widely through Syria and Mesopotamia by virtue of their skills as coppersmiths and very probably also as traders'. Within this perspective, it is also important to remember that the upper Tigris valley is logical connector between the Ergani-Maden copper mines (north of Diyarbakır) and northern Syria (Kelly-Buccellati 1990).

Bibliography

Akkermans, P.M.M.G., 1988 – The Period V Pottery, in M.N. van Loon (ed.), Hammam et-Turkman I (Istanbul-Leiden).

Algaze, G., 1990 – Town and Country in Southeastern Anatolia, II: The Stratigraphic Sequence at Kurban Hoyuk, OIP 110 (Chicago).

Amiran, R., 1989 – A Note on two Items of the Khirbet Kerak Ware Culture, in K. Emre, B. Hrouda, M. Mellink and N. Özgüç (eds.), Anatolia and the Ancient Near East. Studies in Honor of Tahsin Özgüç (Ankara), 9-10.

Anastasio, S., 1999 – 'Prospection archéologique du Haut-Khabur occidentale (Syrie du N.E.). Preliminary Information on the Pottery of the Iron Age', in A. Hausleiter and A. Reiche (eds.), Iron Age Pottery in Northern Mesopotamia, Northern Syria and South-Eastern Anatolia (Münster), 173-91.

Boehmer, R.M., 1972 – Die Kleinfunde von Boğazköy aus den Grabungskampagnen 1931-1939 und 1952-1969, Boğazköy-Hattuša VII, WVDOG 87 (Berlin).

Bossert, E.M., 2000 – Die Keramik phrygischer Zeit von Boğazköy: Funde aus den Grabungskampagnen 1906, 1907, 1911, 1912, 1931-39 und 1952-60, Boğazköy-Hattuša XVIII (Mainz am Rhein).

Braidwood, R.J. and Braidwood, L.S., 1960 – Excavations in the Plain of Antioch, I: The Earlier Assemblages Phases A-J, OIP 61 (Chicago).

Buccellati, G., and Kelly-Buccellati, M., 1988 – Mozan I. The Soundings of the First Two Seasons, Bibliotheca Mesopotamica 20 (Malibu).

Buccellati, G., and Kelly-Buccellati, M., 2000 – 'The Royal Palace of Urkesh. Report on the 12th Season at Tell Mozan/Urkeh: Excavations in Area AA, June-October 1999', *Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin* 132 (Tübingen), 133-184.

Burney, C., 1997 – 'Hurrians and Indo-Europeans in their Historical and Archaeological Context', *Al-Rafidan* 18 (Tokyo), 175-194.

Curtis, J., 1989 – Excavations at Qasrij Cliff and Khirbet Qasrij, British Museum Western Asiatic Excavations 1 (London).

Diamant, S., and Rutter, J., 1969 – 'Horned Objects in Anatolia and the Near East and Possible Connections with the Minoan "Horns of Consecration"', *Anatolian Studies* 19 (London), 147-177.

Di Nocera, G., 1998 – Die Siedlung der Mittelbronzezeit von Arslantepe: eine Zentralsiedlung von Beginn des zweiten Jahrtausends v.Chr. in der Ebene von Malatya (Türkei) (Rome).

Doyuran, V., Toprak, V., and Akgün, H., 2001 – 'Geotechnical Problems of Hasankeyf Settlement Area', in N. Tuna, J. Öztürk and J. Velibeyoğlu (eds.), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 1999 (Ankara), 833-54.

Eidem, J., 2000 – 'Northern Jezira in the 18th Century. Aspects of Geo-Political Patterns', *Subartu* VII (Turnhout), 255-264.

Erkanal, H., 1991 – '1989 Girnavaz kazıları', *Kazı Sonuçları Toplantısı* XII.1 (Ankara), 261-273.

Esin, U., 1970 – 'Tepecik Excavations: 1968 Campaign, Preliminary Report', in *METU, Keban Project* 1968 *Summer Work* no. 1 (Ankara), 159-172.

Esin, U., 1982 – 'Tepecik Excavations', in *METU, Keban Project* 1982 no. 7 (Ankara), 96-118.

Frabe, J.E., 1996 – The Tell Leilan Period I Habur Ware Assemblage (unpublished Ph.D. dissertation).

Frankel, R., 2003 – 'The Olynthus Mill, Its Origin and Diffusion: Typology and Distribution', *American Journal of Archaeology* 107.1 (Boston), 1-21.

Griffin, E., 1980 – 'The Middle and Late Bronze Age Pottery', in M. van Loon (ed.) Korucutepe III (Istanbul), 3-110.

Hamlin, C., 1971 – The Habur Ware Ceramic Assemblage of Northern Mesopotamia: An Analysis of Ist Distribution (unpublished Ph.D. dissertation).

Hamlin, C., 1974 – 'The Early Second Millennium Ceramic Assemblage of Dinkha Tepe', *Iran* XII (London), 125-154

Hauptmann, H., 1972 – 'Die Grabungen auf dem Norşuntepe, 1970', in *METU, Keban Project* 1970 *Activities* no. 3 (Ankara), 103-132.

Hauptmann, H., 1982 – 'Die Grabungen auf dem Norşuntepe, 1974', in *METU, Keban Project* 1982 no. 7 (Ankara), 41-70.

Holland, T.A., 2006 – Archaeology of the Bronze Age, Hellenistic, and Roman Remains from an Ancient Town on the Euphrates River. Excavations at Tell Es-Sweyhat, Syria. Volume 2, OIP 125 (Chicago).

Hoppenheim, M.F. von, and Hrouda, B., 1962 – Tell Halaf IV. Die Kleinfunde aus historischer Zeit (Berlin).

Karg, N., 1999 – 'Gre Dimse 1998: Preliminary Report', in N. Tuna and J. Öztürk (eds.), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 1998 (Ankara), 237-97.

Kaschau, G., 1999 – Lidar Höyük. Die Keramik der Mittleren Bronzezeit (2 volumes), Archaeologica Euphratica 3 (Mainz).

Kelly-Buccellati, M., 1990 – 'Trade in Metals in the Third Millennium: Northeastern Syria and Eastern Anatolia', in M. van Loon, P. Matthiae and H. Weiss (eds.), Resurrecting the Past: a joint tribute to Adnan Bounni (Istanbul), 117-131.

Kelly-Buccellati, M., 2002 – 'L'arte di Urkesh', in S. Bonetti (ed.), Gli Opifici di Urkesh, Urkesh/Mozan Studies 4 (Malibu), 47-62.

Kelly-Buccellati, M., 2004 – 'Andirons at Urkesh: New Evidence for the Hurrian Identity of the Early Trans-Caucasian Culture', in A. Sagona (ed.), A View from the Highlands: Archaeological Studies in Honour of Charles Burney, ANES suppl. 12 (Harentl), 67-89.

Kelly-Buccellati, M., 2005 – 'Urkesh and the North. Recent Discoveries', in D.I. Owen and G. Wilhelm (eds.), General Studies and Excavations at Nuzi 11/1, Studies of the Civilization and Culture of Nuzi and the Hurrians 15 (Bethesda), 29-40.

Korfmann, M., 1982 – Tilkitepe. Die ersten Ansätze prähistorischer Forschung in der Östlichen Türkei, Istanbuler Mitteilungen-Beiheft 26 (Tübingen).

Koşai, H.Z., 1976 – Keban Project. Pulur Excavations 1968-1970. *METU, Keban Project Publications*, Series III.1 (Ankara).

Közbe, G., et al. 2004 – '2001 Excavations at Kavuşan Höyük', in N. Tuna, J. Greenhalgh and J. Velibeyoğlu (eds.), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2001 (Ankara), 463-504.

Közbe, G., and Rothmann, S., 2005 – 'Chronology and Function at Yarım Höyük, Part II', *Anatolica* XXXI (Leiden), 111-144.

Kühne, H., 1976 – Die Keramik vom Tell Chuera und ihre beziehungen zu funden aus Syrien-Palästina, der Türkei und dem Iraq, Vorderasiatische Forschungen der Max Freiherr von-Oppenheim-Stiftung 1 (Berlin).

Laneri, N., 2005 – 'Hirbemerdon Tepe 2003: A Preliminary Report', *Kazı Sonucları Toplantısı* XXVI (Ankara), 63-72.

Laneri, N., in press a – A Preliminary Report of the 2003 Survey and Excavation at Hirbemerdon Tepe (Southeastern Anatolia, Turkey), *Annali dell'Istituto Orientale di Napoli – Dip. Studi Asiatici 64* (Naples).

Laneri, N., in press b – The Second Season of Archaeological Work at Hirbemerdon Tepe (Turkey): A Preliminary Report, *East and West 55* (Rome).

Lloyd, S., and Gökçe, N., 1953 – 'Sultantepe. Anglo-Turkish Joint Expedition, 1952', *Anatolian Studies* 3, (London) 27-51.

Lupton, A., 1996 – Stability and Change. Socio-political development in North Mesopotamia and South-East Anatolia 4000-2700 BC, BAR International Series 627 (Cambridge).

Marro, C., and A. Özfirat 2003 – 'Pre-Classical Survey in Eastern Turkey. First Preliminary Report', *Anatolia Antiqua* XI (Paris), 385-423.

Matney, T., 1998 – 'The First Season of Work at Ziyaret Tepe in the Diyarbakır Province: Preliminary Report', *Anatolica* XXIV (Leiden), 7-30.

Matney, T., et al. 2002 – 'Archaeological Excavations at Ziyaret Tepe, 2000 and 2001', *Anatolica* XXVIII (Leiden), 46-89.

Matney, T., et al. 2003 – 'Archaeological Investigations at Ziyaret Tepe, 2002', *Anatolica* XXIX (Leiden), 175-221.

Matney, T., and Rainville, L., (eds.) 2005 – 'Archaeological Investigations at Ziyaret Tepe, 2003-2004', *Anatolica* XXXI (Leiden), 19-68.

Matthews, R., (ed.) 2003 – Excavations at Tell Brak, 4: Exploring an Upper Mesopotamian Regional Centre, 1994-1996, McDonald Institute Monographs, British School of Archaeology in Iraq (Cambridge-London).

Merluzzi, E., 2000 – 'Basalt Tools at Ebla: An Example of "Ground Stone" Industry in a Central Site of the Bronze Age Period', in P. Matthiae et al. (eds.), Proceedings of the First International Congress on the Archaeology of the Near East, Rome, May 18th-23rd 1998. Vol. II (Rome), 1061-1078.

Miglus, P., 1996 – Das Wohngebiet von Assur. Stratigraphie und Architecture, Ausgrabungen der Deutschen Orient-Gesellschaft in Assur – D, Allgemeines (Berlin).

Nigro, L., 1998 – 'Ebla and the Ceramic Provinces of Northern Syria in the Middle Bronze Age: Relationship and Interconnections with the Pottery Horizons of Upper Mesopotamia', *Subartu* IV.1 (Turnhout), 271-304.

Oates, J., 1985 – 'Tell Brak: Uruk pottery from 1984 season', *Iraq* XLVII (London), 175-186.

Oates, D., Oates, J., and McDonald, H., 2001 – Excavations at Tell Brak, II: Nagar in the Third Millennium, McDonald Institute Monographs, British School of Archaeology in Iraq (Cambridge-London).

Oguchi, H., 1997 – 'A Reassessment of the Distribution of Khabur Ware: An Approach from an Aspect of its Main Phase', *Al Rafidan* XVIII (Tokyo), 195-224.

Oguchi, H., 1998 – 'Notes on Khabur Ware from Outside Its Main Distribution Zone', *Al Rafidan* XIX (Tokyo), 119-133.

Oguchi, H., 1999 – 'Trade Routes in the Old Assyrian Period', *Al Rafidan* XX (Tokyo), 85-106.

Oguchi, H., 2003 – '20th Century BC North Mesopotamia: An Archaeological Dilemma', *Al Rafidan* XXIV (Tokyo), 83-100.

Ökse, T., 1999 – 'Salat Tepe: Research in 1998', in N. Tuna, and J. Öztürk (eds.), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 1998 (Ankara), 333-351.

Ökse, T., et al. 2001 – 'Salat Tepe, 1999 Survey', in N. Tuna, J. Öztürk, and J. Velibeyoğlu (eds.), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 1999 (Ankara), 620-670.

Özfirat, A., 2002 – 'Khabur Ware from Hakkari', *Ancient Near Eastern Studies* 22 (Melbourne), 141-151.

Parker, B., and Creekmore, A., 2002 – 'The Upper Tigris Archaeological Research Project (UTARP): A Final Report from the 1999 Field Season', *Anatolian Studies* 52 (London), 19-74.

Parker, B., and Swartz Dodd, L., 2003 – 'The Early Second Millennium Ceramic Assemblage from Kenan Tepe, southeastern Turkey. A Preliminary Assessment', *Anatolian Studies* 53 (London), 33-70.

Parker, B., et al. 2003 – 'The Upper Tigris Archaeological Research Project (UTARP): A Preliminary Report from the 2001 Field Season', *Anatolica* XXIX (Leiden), 102-174.

Parker, B.J., and Swartz Dodd, L., (eds.) 2005 – 'The Upper Tigris Archaeological Research Project. A Preliminary Report from the 2002 Field Season', *Anatolica* XXXI (Leiden), 69-110.

Pecorella, P.E., and Salvini, M., 1984 – Tra lo Zagros e l'Urmia. Ricerche storiche e archeologiche nell'Azerbaigian iraniano (Rome).

Pollock, S., and Coursey, C., 1995 – 'Ceramics from Hacınebi Tepe: chronology and connections', *Anatolica* XXI (Leiden), 101-141.

Rothman, M., 1995 – 'The Pottery of the Muş Plain and the Evolving Place of a High Border Land', *Araştırma Sonuçları Toplantısı* XII (Ankara), 281-304.

Russell, H., 1980 – Pre-Classical Pottery of Eastern Anatolia, BAR International Series 214 (Oxford).

Sagona, A.G., 1984 – The Caucasian Region in the Early Bronze Age, BAR International Series 214 (Oxford).

Sagona, A.G., 2000 – Sos Höyük and the Erzurum Region in Late Prehistory: A Provisional Chronology for Northeast Anatolia, in C. Marro and H. Hauptmann (eds.), Chronologies des Pays du Caucase et de l'Euphrate aux IVe-IIIe Millénaires, Varia Anatolica XI (Paris-Istanbul), 329-373.

Salvini, M., 2000 – 'Les Hourrites dans la Djéziré syrienne', *Subartu* VII (Turnhout), 287-198.

Schachner, A., 2002a – 'From the Bronze to the Iron Age: Identifying Changes in the Upper Tigris Region. The Case of Giricano', in B. Fischer, H. Genz, É. Jean, and K. Köroğlu (eds.), Identifying Changes: The Transition from Bronze to Iron Ages in Anatolia and its Neighboring Regions (Istanbul), 151-167.

Schachner, A., 2002b – '2000 Yılı Giricano Kazıları On Raporu', in N. Tuna, J. Öztürk, and J. Velibeyoğlu (eds.), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2000 (Ankara), 549-612.

Schachner, A., 2002c – 'Ausgrabungen in Giricano (2000-2001). Neue Forschungen an der Nordgrenze des Mesopotamischen Kulturraums. Mit Beiträgen von Peter V. Bartl und Josef Heigermoser', *Istanbuler Mitteilungen* 52 (Tübingen), 9-57.

Schachner, A., 2004 – '2001 Yılı Giricano Kazıları', in N. Tuna, J. Greenhalgh, and J. Velibeyoğlu (eds.), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2001 (Ankara), 505-546.

Schwartz, G., 1988 – A Ceramic Chronology from Tell Leilan: Operation 1, Yale Tell Leilan Research I (New Haven).

Sevin, V., 1987 – 'Imikuşağı kazıları', *Kazı Sonuçları Toplantısı* IX.1 (Ankara), 299-333.

Sevin, V., 1993 – '1992 yili Diyarbakir/Üçtepe höyüşü kazıları', *Kazı Sonuçları Toplantısı* XV.1 (Ankara), 399-416.

Smogorzewska, A., 2004 – 'Andirons and Their Role in Early Trancaucasian Culture', *Anatolica* XXX (Leiden), 151-177.

Starr, R.F.S., 1939 – Nuzi. Report on the excavations at Yorgan Tepa near Kirkuk, Iraq conducted by Harvard University in conjunction with the American Schools of Oriental Research and the University Museum of Philadelphia, 1927-1931 (Cambridge).

Stein, G.J., et al. 1998 – 'Southeast Anatolia before the Uruk Expansion: Preliminary Report on the 1997 Excavations at Hacınebi', *Anatolica* XXIV (Leiden), 143-193.

Steinkeller, P., 1997 – 'The Historical Background of Urkesh and the Hurrian Beginnings in Northern Mesopotamia', in G. Buccellati and M. Kelly-Buccellati (eds.) Urkesh - Mozan Studies 3: Urkesh and the Hurrians: Studies in Honor of Lloyd Cotsen (Malibu), 75-98.

Stuiver, M., and Ploach, H.A. 1977 – 'Discussion: Reporting of 14C Data', *Radiocarbon* 19 (Tucson), 355-363.

Stuiver, M., and Reimer, P. 1993 – 'University of Washington Quaternary Isotope Lab Radiocarbon Calibration Program Rev. 3.0.3A', *Radiocarbon* 35 (Tucson), 215-30.

Summers, G.D., (ed.) 1993 – Tille Höyük 4, the Late Bronze Age and the Iron Age Transition, The British Institute of Archaeology at Ankara, Monograph n. 15 (Ankara).

Takaoğlu, T., 2000 – 'Hearth Structures in the Religious Pattern of Early Bronze Age Northeast Anatolia', *Anatolian Studies* 50 (London), 11-16.

Trokay, M., 2000 – 'Le matériel de broyage en basalte du Tell Ahmar (Area C, fouilles 1989-1996)', in P. Matthiae, A. Enea, L. Peyronel, F. Pinnock, Proceedings of the First International Congress on the Archaeology of the Near East, Rome, May 18th-23rd 1998, vol. II (Roma), 1665-1677.

Uzunuşlu, E., 1985 – 'Imamoşlu kazıları', *Kazı Sonuçları Toplantısı* VII (Ankara), 162-180.

Loon, M.N. van, (ed.) 1978 – Korucutepe. Final Reports on the Excavations of the University of Chicago, California (Los Angeles) and Amsterdam in the Keban Reservoir, Eastern Anatolia, 1968-1970. Vol II (Amsterdam-New York).

Velibeyoğlu, J., Schachner, A., and Schachner, S., 2002 – 'Botan Vadısı ve Çattepe (Tilli) Yusey Araştırmalarının Ilk Sonuçları', in N. Tuna, J. Öztürk, and J. Velibeyoğlu (eds.), Salvage Project of the Archaeological Heritage of the Ilısu and Carchemish Dam Reservoirs Activities in 2000 (Ankara), 783-857.

Whallon, R., 1979 – An Archaeological Survey of the Keban Reservoir Area of East-Central Turkey (Ann Arbor).

Wilhelm, G., 1989 – The Hurrians (Warminster).

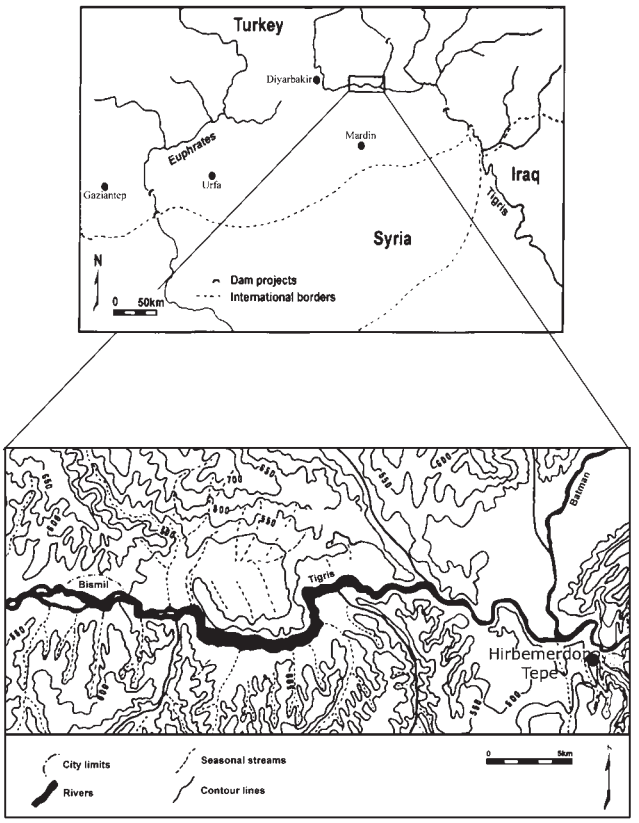

Fig. 1. Geographical position of Hirbemerdon Tepe within the upper Tigris valley (adapted from Parker & Creekmore 2002: figs 1-2).

Fig. 2. The site of Hirbemerdon Tepe viewed from the north.

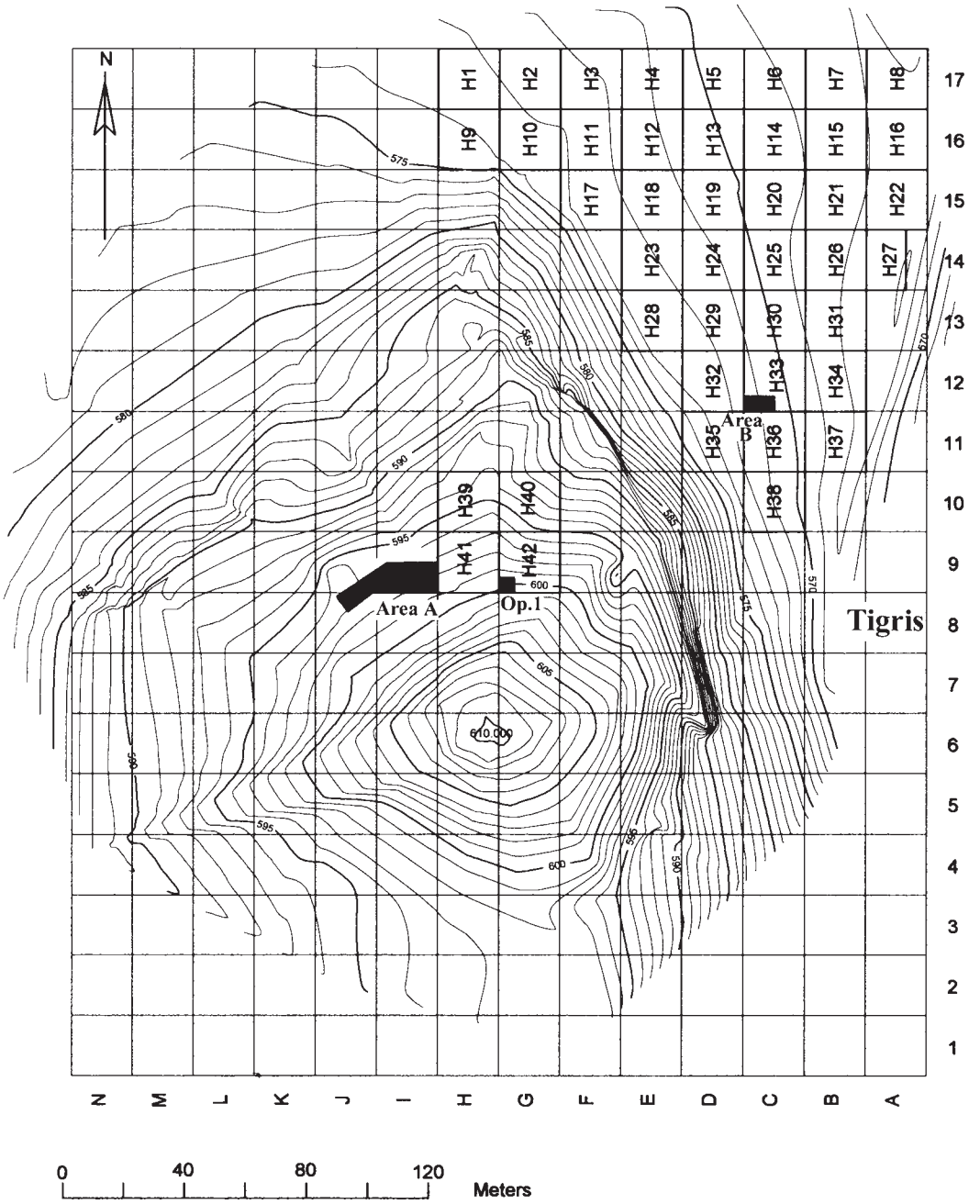

Fig. 3. Topographical map of Hirbemerdon Tepe showing the excavated areas (A, B, and Op. 1 a sounding dug in 2003), and the sections (H1-40) in which the magnetic gradiometer survey was performed in 2004.

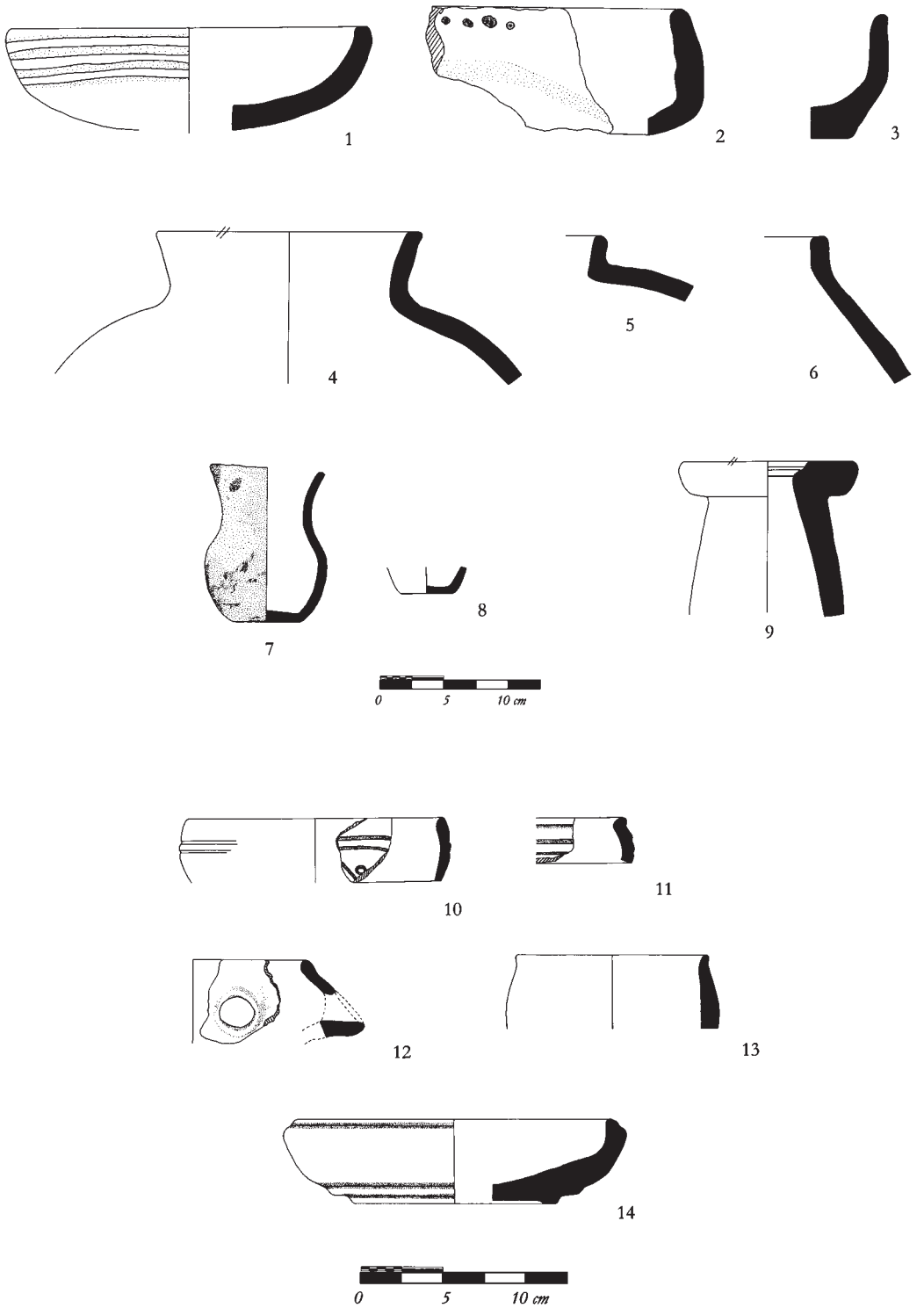

Fig. 4. Drawing of selected potsherds from Area B of the Chalcolithic (1-9) and the Iron Age (10-14) periods.

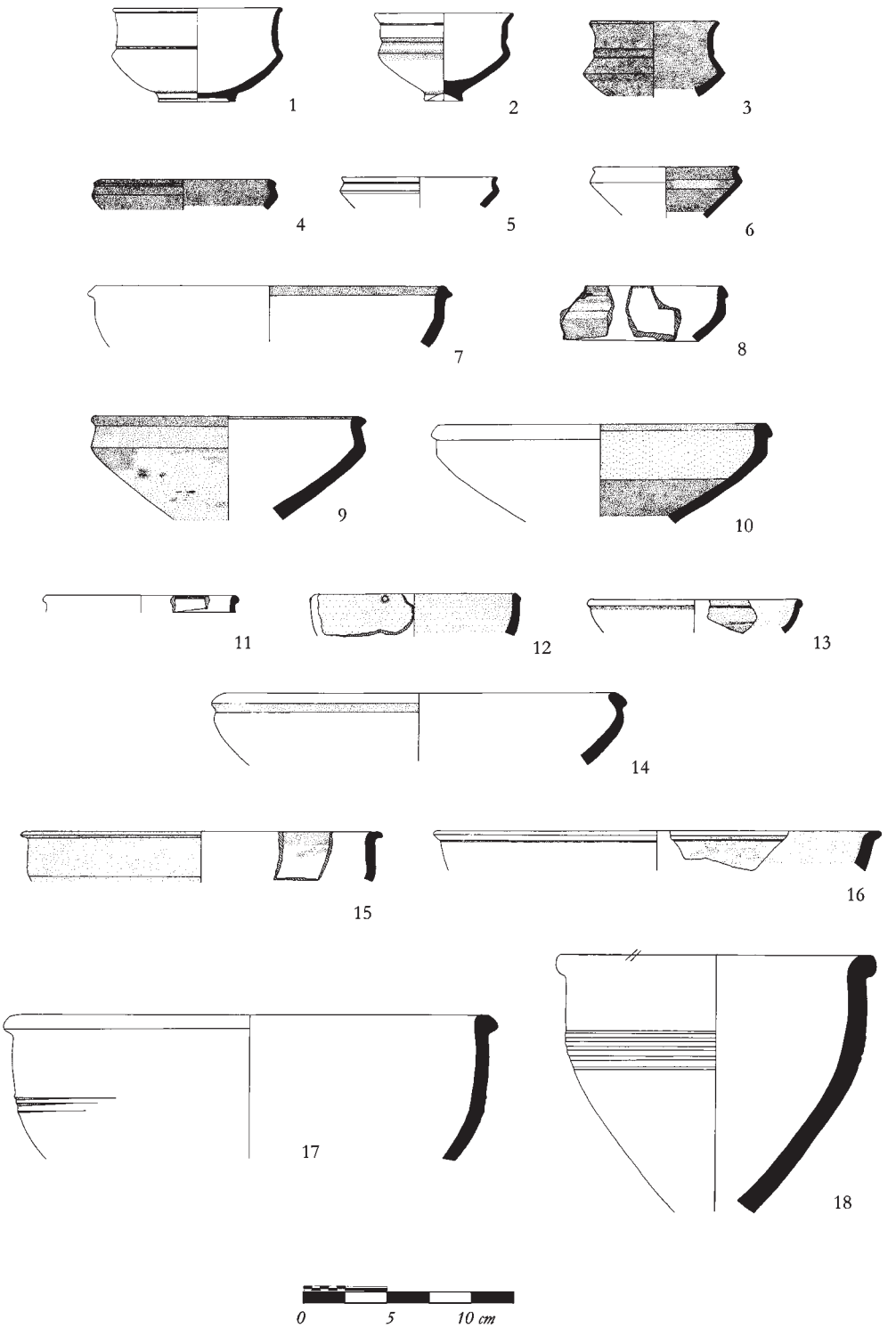

Fig. 5. Drawing of selected potsherds of the Red Brown Wash Ware (RBWW) assemblage from both Area A and B.

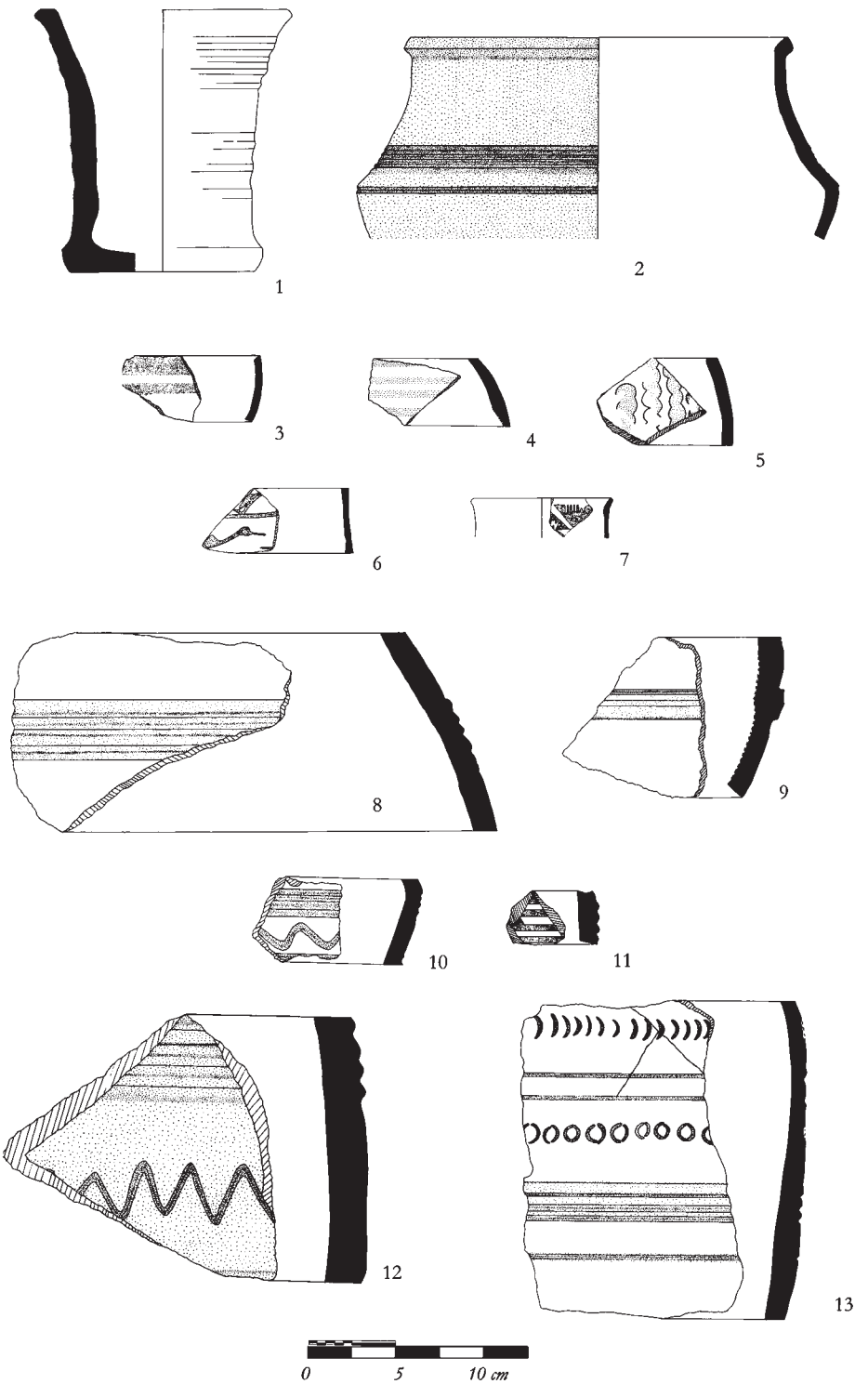

Fig. 6. Drawing of selected potsherds of the Middle Bronze Age (first half of the Second Millennium BC) from both Area A and B.

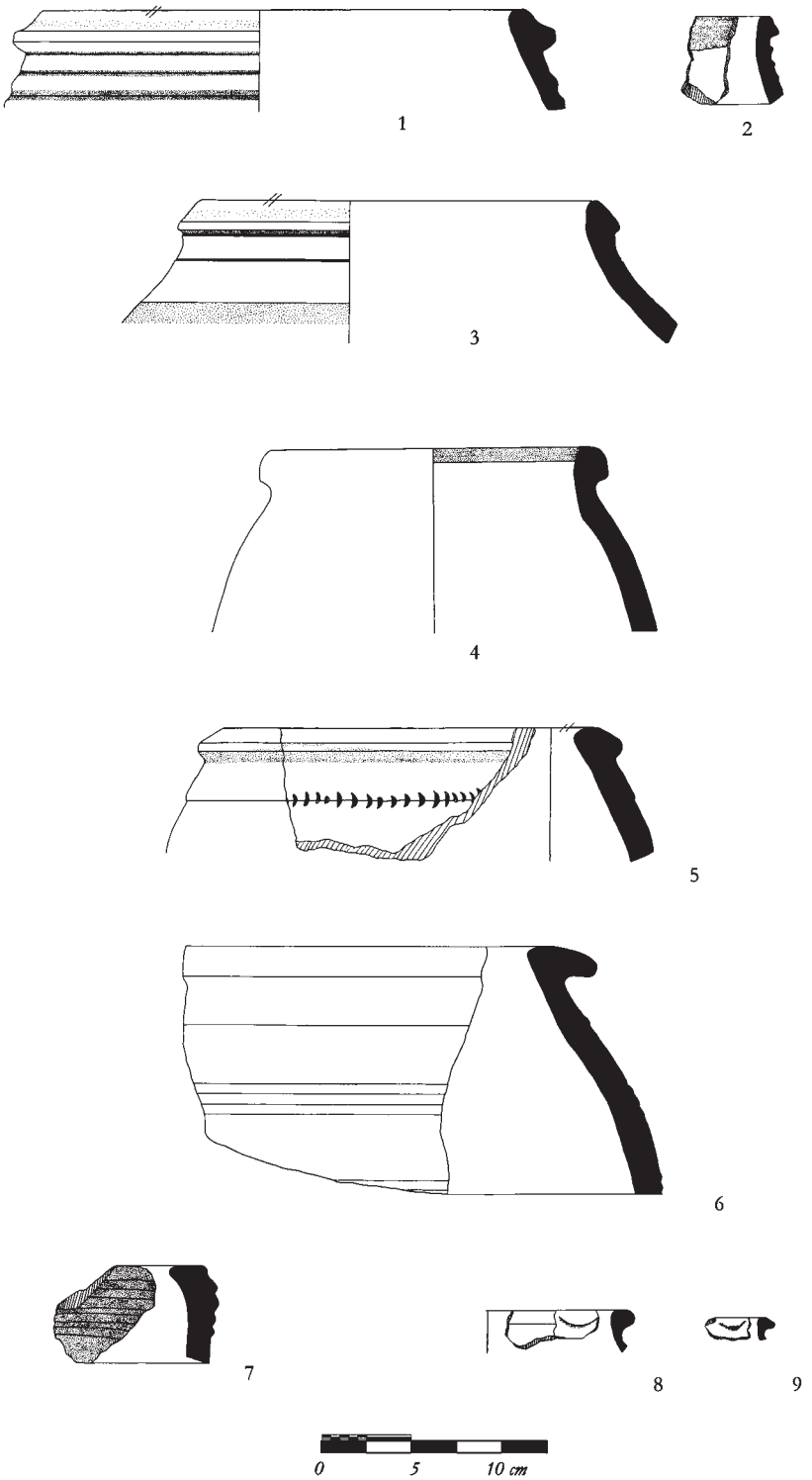

Fig. 7. Drawing of selected potsherds of the storage jars and Cooking Ware (8-9) categories from both Area A and B.

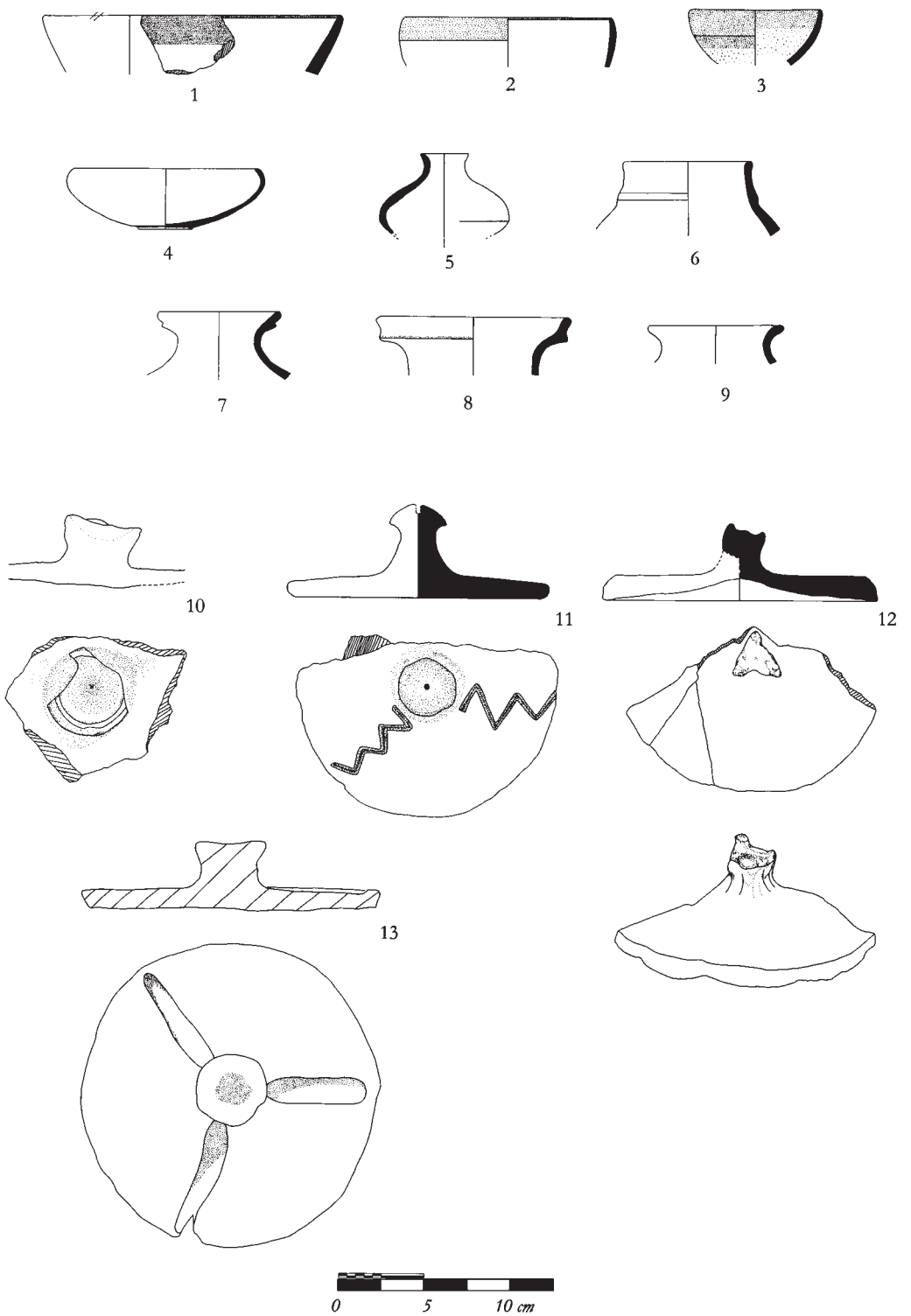

Fig. 8. Drawing of selected potsherds of the late Third Millennium BC (1-9) and of decorated lids (10-13) from both Area A and B.

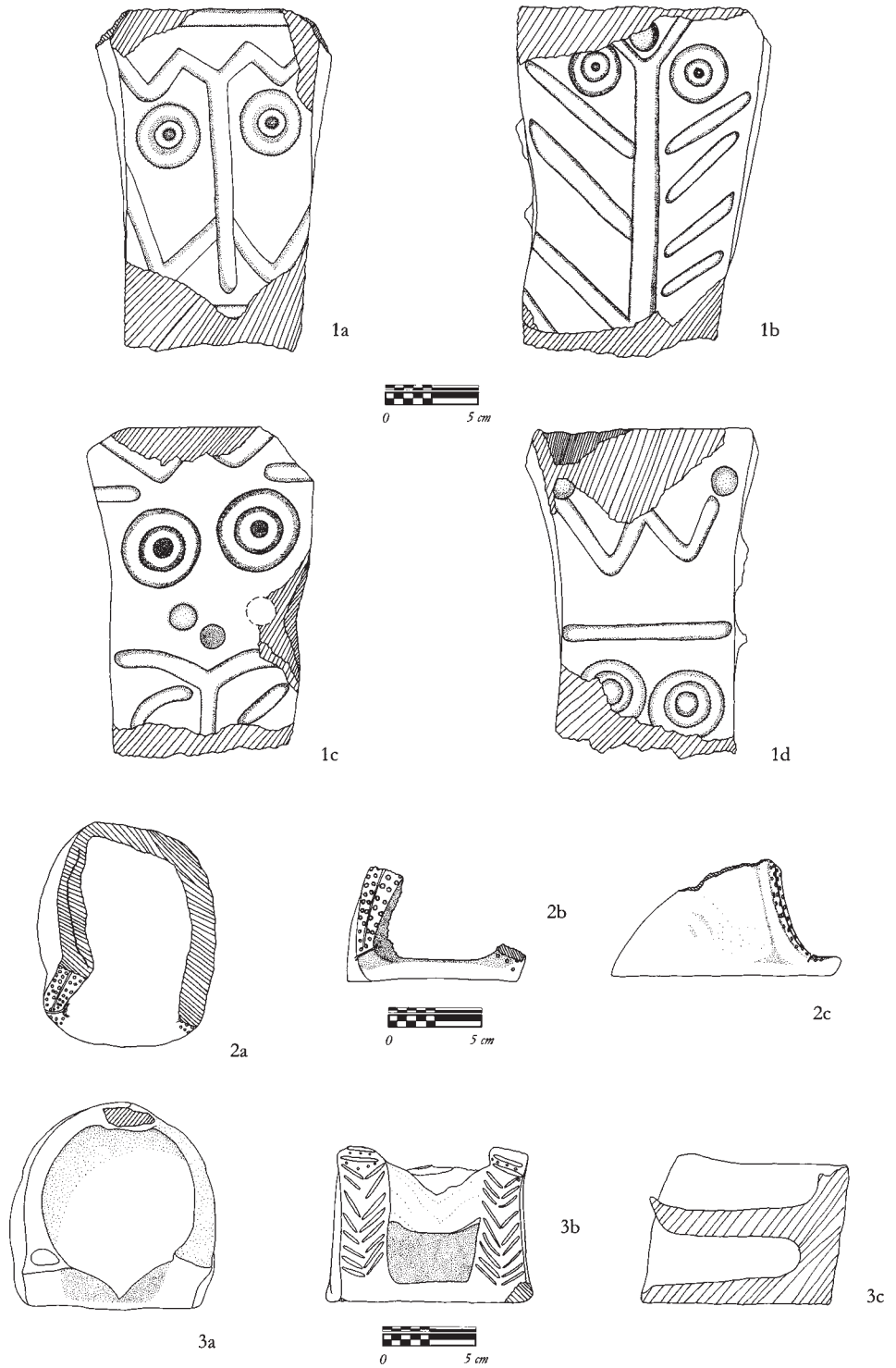

Figure 9. Drawing of portable hearths from the Area A architectural complex.

Fig. 10. One bowl of the RBWW assemblage (top) and of the Dark-Rimmed Orange Bowl type (bottom) found in the niche of a stone platform in Sub-phase B, Area B.

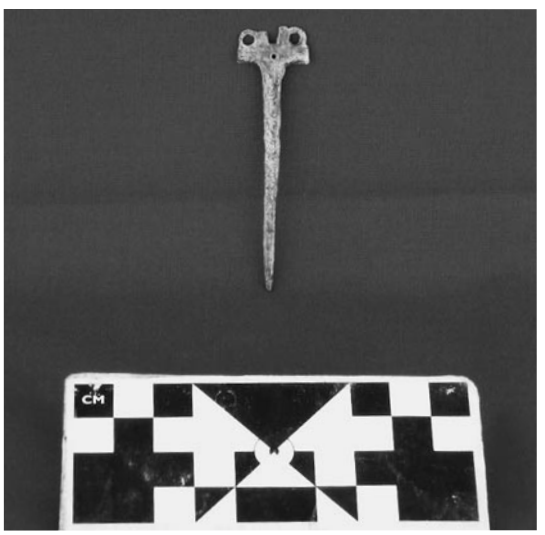

Fig. 11. A bronze pin from Sub-phase B in Area B.

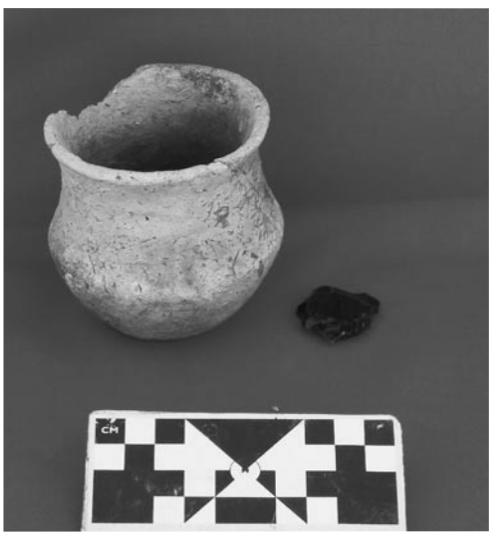

Fig. 12. A beaker (Chaff-Faced Ware) and fragment of obsidian, from inside the beaker, discovered in a pit of the Chalcolithic period in Area B.

Fig. 13. A painted jar of the Iron Age period found inside a pit in Area A.

Fig. 14. A tripartite ceramic basin found in court 12 of Building D within the Area A architectural complex.

Fig. 15. Decorated lids discovered in the storage rooms of the Area A architectural complex.

Fig. 16. A portable hearth brought to light in court 3 of Building A of the Area A architectural complex.

Fig. 17. A portable hearth with anthropomorphic decoration found as a secondary deposit in court 12 of Building D of the Area A architectural complex.

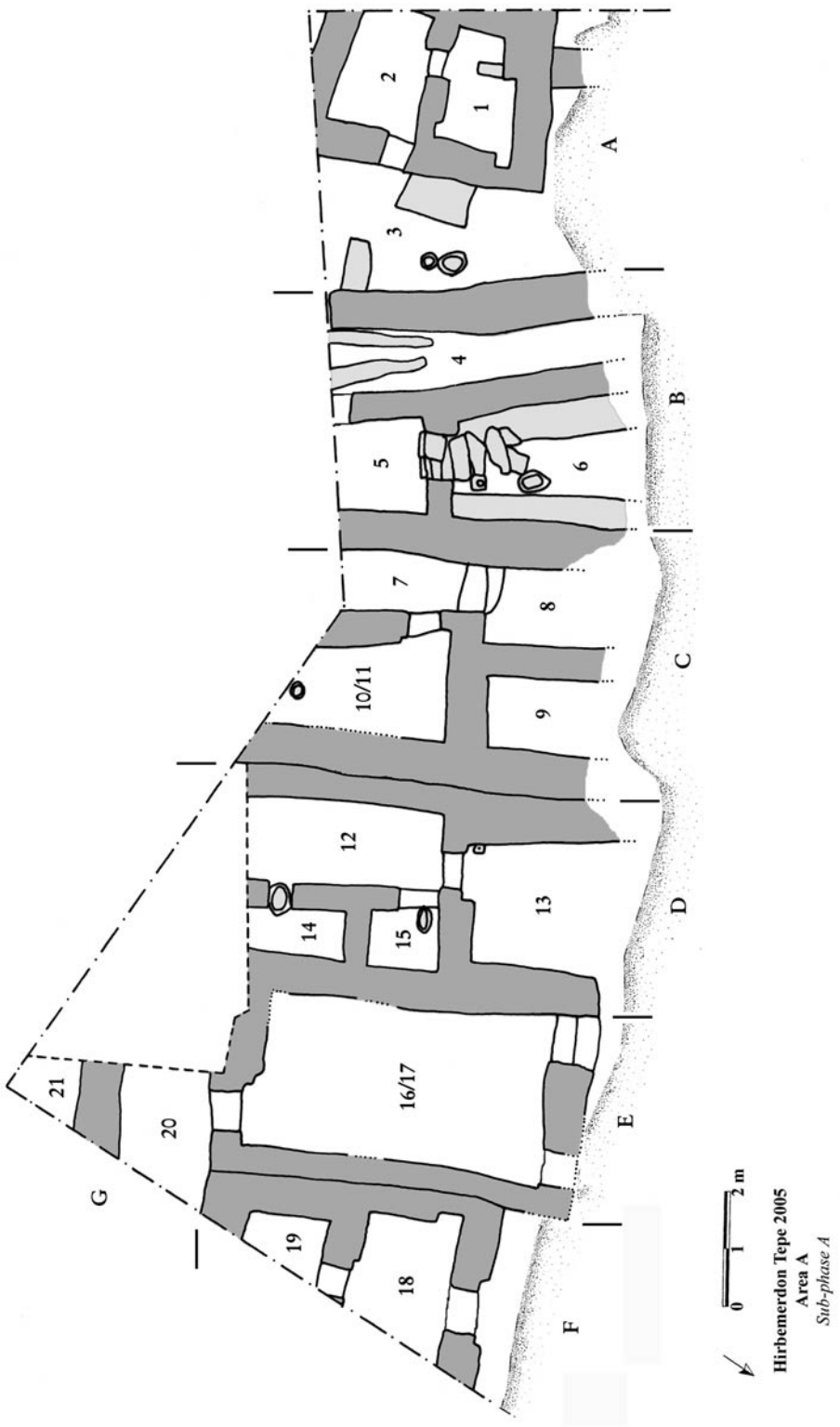

Fig. 18. Detailed plan of Area A architectural complex (Sub-phase A).

Fig. 19. Building A (Sub-phase A) of Area A architectural complex viewed from the eastern side.

Fig. 20. The main staircase of Area A architectural complex (Building B) viewed from the north.

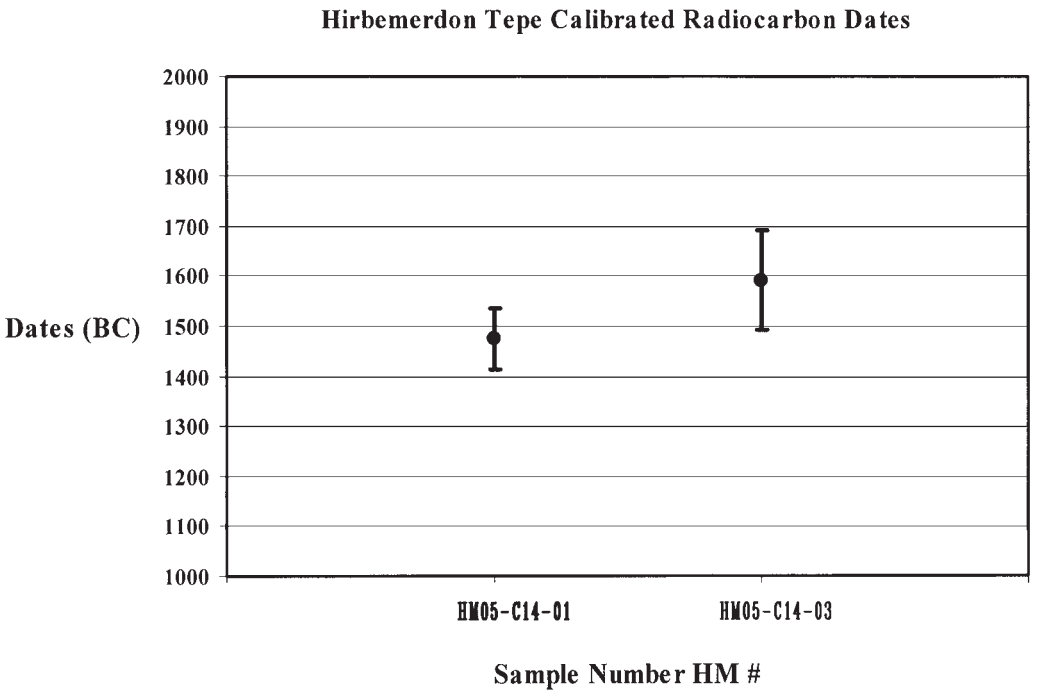

Table 1. Calibrated Radiocarbon dates from Sub-phase A of Area A architectural complex.

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THE POLITICAL AND PHYSICAL TOPOGRAPHY OF EARLY IMPERIAL GRAECO-ROMAN ANCYRA

Julian Bennett[1]

INTRODUCTION

In his magisterial study of Anatolia in antiquity, S. Mitchell drew attention to the way Rome presided over the process of urbanisation in Galatia specifically through the founding of three new city states at Ancyra, Tavium, and Pessinus.[2] He further observed that the political model adopted for this process was the settlement Pompey imposed on Pontus in c. 64 BC, by which that newly annexed territory was divided into eleven *poleis*, each given an assigned political centre and a constitution to ensure the successful administration of both *polis* and *chora*.[3] Mitchell's account of the method in Galatia, however, was deliberately summary in form, and thus he did not assess in detail either the municipalisation or the monumentalisation of the region as a whole, nor the specific case of Ancyra, *metropolis provinciae Galatiae* - except for giving an account of the explicit example of Ancyra's Temple to Augustus and Roma.

It would be easy to suppose from the brevity of Mitchell's account that other than this temple, very little else has survived of note from Ancyra's Roman past, and it would be difficult to conclude to what extent either Ancyra or its inhabitants were ever 'Romanised'. Indeed, for those less aware of the state of affairs, Mitchell's report might have given the impression that there is little surviving evidence for and to what extent Ancyra had any of the three usual and interrelated features of a classical city: a defined political system; public and civic buildings; and a communal life revolving around shared leisure and cultic activities. For scholars who are familiar with European approaches to urban archaeology, the apparent absence of solid data about Ancyra's classical past might have thus seemed calamitous. Yet in general, as a casual survey of the relevant literature quickly shows, Ancyra is not unique in this regard in the context of modern Turkey. In actual fact, urban archaeology is so neglected a subject in the country that secure

[1] Department of Archaeology and Art History, Bilkent University, Ankara. I am grateful to Susan Cooke for the use of her unpublished survey of Roman Ancyra (Cooke 1998); to Jacques Morin, for help with the Greek inscriptions and for reading and commenting on the text; and Ben Claasz Coockson, who provided the drawings. In addition, I wish to thank M.-H. Gates, my Head of Department, for facilitating the writing of this paper; the staff of the British Institute in Ankara for their forbearance and assistance in that process; and Jacob Roodenberg for the invitation to submit this article, which supersedes Bennett 2003. None of these esteemed colleagues is to be blamed, however, for any interpretations and views expressed here.

[2] Mitchell 1993, 86-89.

[3] Mitchell 1984, and 1993, 88-89.

information in any form or of any type is sorely lacking for almost all of those settlements of classical date now sealed beneath modern Turkey's conurbations.

This situation is quite the reverse, of course, for the 'green-field' sites of classical Anatolia. After all, it is perhaps logical and inevitable that scholars in the past and today should prefer to focus their attention on such admittedly magnificent sites as Ephesus and the like, where the rewards in terms of epigraphy, and of artistic and architectural material are guaranteed. But the result is a grossly imbalanced view of the urbanisation process in Anatolia under imperial Rome. Thus this extended article, which aims firstly at redressing the balance by liberating from obscurity the comparative wealth of evidence for the nature of Graeco-Roman Ancyra in the period before c. 250; and secondly indicating the kind of knowledge that might yet be accumulated through an ordered programme of urban research and rescue excavation. It must be noted, however, that the biased and partial nature of the available data inevitably means that gaps in our knowledge must be compensated for by analogy and broader generalizations.

THE GENESIS OF GRAECO-ROMAN ANCYRA

In 25 BC, Amyntas, the king of Galatia, died during a campaign against the Homanadenses, and Augustus incorporated his kingdom into the Roman *imperium* as the province of Galatia. The inaugural governor of the new province was M. Lollius.[4] It can be reasonably assumed that among his principal duties was the responsibility for implementing the process whereby this region of rural communities was transformed into a fully functioning Roman province, with an administrative infrastructure based on a series of semi-independent city-states. The motive behind this delegation of powers to the Galatians was simple: to create a suitable system of local self-administration that could best function for the benefit of Rome with the minimum of direct intervention. Some Roman commentators might have characterised this procedure as part of an altruistically motivated 'humanising' or 'civilising' programme,[5] but the truth was that Rome had learnt through long and hard experience that the best way to manage her overseas territories was by assigning the duty to some form of locally-managed administrative entity as soon as this was possible.

Such a procedure had worked well and with remarkably little direct involvement from Rome in those regions where there already was some form of local control based on the Hellenic *polis* system, as, for example, in the province of Asia. Elsewhere, however, Rome had to follow the precedent of Alexander and his successors, introducing and encouraging the necessary political and urbanised structure, making use, wherever possible, of any pre-existing settlements to provide the overall framework. Such was the

[4] Rémy 1989, 127-129. Lollius was evidently highly successful in all of his assigned responsibilities in Galatia, for in 21 BC, after completing his mission there, he was made senior consul ordinarius, only the second time since 31 BC that Augustus did not hold the position himself.

[5] E.g., Virgil *Aen.* 6.851-853; and Pliny *NH* 3.39.

approach adopted by Pompey the Great in c. 64 BC, when he annexed the kingdom of Pontus to Rome. Under its last king, Mithridates, this was a region dominated by royal and sacred lands interspersed with village-type settlements, a settlement system suitable for centralized monarchical rule. Now the region was amalgamated with the existing province of Bithynia, and the territory divided between eleven newly constituted Hellenic-style *poleis*, four of them based on existing centres but the rest entirely new foundations, formed by synoecism, and all intended to provide an administrative system that conformed to Roman provincial policy. Indeed, so successful was this system, that Augustus emulated the process in Galatia, where sometime before 23/21 BC, the three Galatian tribes were re-constituted as three distinct political units, the Sebasteni Trocmi Taviani, the Sebasteni Tolistobogii Pessinuntii, and the Sebasteni Tectosages Ancyrani.[6] In each case, the dynastic prefix 'Sebasteni' emphasised that the new polities were his own creation, while the toponymic suffix identified the place recognised as their formal administrative centre, namely Tavium, Pessinus and Ancyra.[7]

At the time this political reorganisation was introduced, both Tavium and Pessinus were places of consequence. Tavium, for example, was a major *emporion* with a renowned monumental bronze statue of Zeus set within a *temenos* that had the right of asylum.[8] Pessinus, on the other hand, was the largest of the regional *emporia*, as well as being a thriving temple-state, dedicated to Agdistis, with a sanctuary surrounded by white marble porticoes donated by the Attalid dynasty.[9] The nature and appearance of contemporary Ancyra, however, is quite uncertain. Although the location is referred to by name in several Hellenistic sources, there is no evidence for any activity at the place in the Hellenistic period, other than a few coins of late 4th – early 2nd century date and unspecified 'Hellenistic' pottery found in the Ulus district.[10] Yet it seems highly unlikely and hardly credible that the Tectosages were assigned an uninhabited place of no significance whatsoever for their tribal centre, and so we might reasonably assume that some kind of permanent settlement at least superficially comparable to those at Tavium and Pessinus also existed at Ancyra when the province of Galatia was formed. Indeed, given the exceedingly poor attention given in the past to building developments in the Ulus district, we cannot entirely dismiss the prospect that Ancyra was the location of the

[6] The formal date of their creation depends on the start date assigned to the Ancyran era: Leschhorn 1992, 334, favours 25/24 BC, Halfmann 1986, 38, prefers 23-22 BC, while Mitchell 1993, 87, says '22 or perhaps 21 BC'.

[7] Cf. the situation in Asturia and Cantabria, where in 19 BC, Augustus created three new formal political units, the Asturica Augusta, the Lucus Augusta, and the Bracara Augusta, all three of their new urban centres apparently being established at pre-existing native sites: cf. Florus 2.33.59; Pliny *NH* 3.1.18; and Tranoy 1981, 191-193.

[8] Strabo 12.5.2 (567), with *BMC Galatia*, 24-27, nos. 2-4, 6 and 16-18, for Tavium coins that show the seated statue of Zeus, apparently modelled on that at Olympia.

[9] Strabo 12.5.3 (567).

[10] Ancyra is named, for example as the location where Alexander accepted the surrender of the Paphlagonians in 333 BC (Curtius Rufus *Alex.* 3.1.22; Arrian *Anab.* 2.4.1); as the place where Seleucus II and Antiochus Hierax fought for control of the Seleucid Empire in 240/239 BC (Justin *Ep.* 27); and as the site of a Roman marching camp in 189 BC during M.Vulso's war against the Galatians (Livy 38.24.1-2, and 25.1; cf. Polybius 21.39.1, and Zonaras *Ann.* 9.21 (P I 454 C). For the archaeological evidence, cf. Arslan 1996, 108; and Temizsoy, *et al.*, 1996. For a brief overview of the evidence for pre-Hellenistic Ancyra, cf. Bennett 2003, 1-3.

nea polis of Arsinoe initiated by the Galatian ruler Deiotarus in c. 54/53 BC.[11] The idea might seem far-fetched, for the typical form of Galatian settlement at this time *'was* the small fortified stronghold, or *phrourion*, usually placed in a well-defended situation remote from the main lines of communication'.[12] Yet Deiotarus, a friend of Cicero and of Pompey, and honoured by the people of Athens for some unspecified reason,[13] was certainly 'Hellenised' enough in thought and manner to embark on such an enterprise, even if it was perhaps stillborn, never to be completed owing to his age and the vicissitudes of his reign.

But even if Ancyra was not the location of Deiotarus' *nea polis*, the place was chosen as the central meeting place for the Tectosages when the province of Galatia was formed, and the inescapable conclusion is that some form of settlement existed there at that time. This being so, then the most likely location for such a settlement would be the highly defensible hill-top location overlooking Graeco-Roman Ancyra from the east, and later appropriated by the early medieval kale.[14] This could indeed just be deduced from the comments of Strabo, the only near contemporary source for the nature of Ancyra at this time, as he ambiguously categorises the place as a *polis* in one place, and then elsewhere names it as a *phrourion.*[15] It is now generally accepted that while Strabo compiled the bulk of his Geographia between AD 18-24, he was also using much earlier source material, making it 'A Tiberian work chronologically, but an Augustan thematically'.[16] In which case, if we are to take Strabo's comments at face value, then by using the word *phrourion* he could well have been describing the physical state of Ancyra at the time of the annexation, namely a fortress on the Kale hill; by referring to it as a *polis* he was reporting its nature in his own time, the early years of Tiberius' reign, when Ancyra was well established as the administrative centre of the Sebasteni Tectosages Ancyrani, with at least one public building, a temple to the deified Augustus and Roma.

Unfortunately, our only other near contemporary sources, Livy and Pliny the Elder, do not provide any light on the matter. The first, writing in the middle years of Augustus' principate, describes Ancyra as '*nobilem in illis locis urbem*', 'a famous city in that region'.[17] While his historical context is Vulso's campaign against the Galatians in 189 BC, and the terminology thus anachronistic, Livy's specific use of the word *urbs* for Ancyra suggests he was referring to the appearance and status of the place in his own time, as an urbanised settlement and the recognised Galatian capital. Pliny, on the other hand, writing under Vespasian but evidently in this case using older material, simply

[11] Plutarch *Crassus* 17.1-2; cf. Malalas *Chron.* 9.236, which also supplies the name.

[12] Mitchell 1993, 58.

[13] Mitchell 1993, 33-37; *OGIS* no.347.

[14] Mamboury 1937, 57, and 69-71; cf. Strobel 2002, 9, who erroneously implies that there is evidence for pre-medieval use of the Kale hill: despite the on-going development of the kale district, none of this work has been subjected to a watching brief, never mind controlled excavation, and the nature of any settlement there before the medieval period can only be guessed at.

[15] Strabo 4.1.13 (187), as a *polis*, and 12.5.2 (567), as a *phrourion.*

[16] Dueck 2000, 151.

[17] Livy 38.24.1.

classes all three of the Galatian centres – Tavium, Pessinus and Ancyra - as *oppida*, his favoured term when lacking detailed information about a given place of at least semi-urban status.[18] From the literary evidence alone, therefore, the character and appearance of 'Hellenistic' Ancyra at the time of the Roman annexation cannot be satisfactorily resolved. Consequently, in this paper we shall follow the orthodox line, in supposing that all remains of the classical period at Ancyra are no earlier than c. 25-22 BC.[19]

THE POLITICAL TOPOGRAPHY

Although the precise status and physical nature of Ancyra at the time it was designated as the political centre of the Sebasteni Tectosages cannot be resolved at present, inscriptions leave us in no doubt that it possessed the defining characteristics of the Hellenic city-state system: a *demos* or citizen body; and a *boule*, a council with the right to make decrees.[20] More to the point, as Mitchell has persuasively argued, given that the somewhat unusual titles of Ancyra's magisterial institutions in Ancyra are shared with those in Bithynia, then it can be concluded that Ancyra's political constitution was based on the *lex Pompeia*, the code of regulations Pompey imposed on the communities he incorporated into the joint province of Pontus-Bithynia in c. 65/4 BC.[21]

There is, of course, no surviving literary text that reports any part of the *lex Pompeia* word for word. To judge from the later municipal charters introduced into certain communities in Iberia, however, it was probably very detailed, as befitted such an innovative legal document, albeit with minor variations as required by the individual *poleis*.[22] Nonetheless, its general lines can be reconstructed from incidental references in the correspondence between Trajan and Pliny the Younger, when governor of Bithynia in 109-111. These reveal that the *lex Pompeia* blended Roman models of local government with the practices usually found in an established Hellenic city-state.[23] Thus following Roman practice, there was (initially at least) a qualifying age of 30 for election to a magistracy, which in turn gave a person automatic life-long membership of the governing council, other and additional members of this body being approved when necessary or expedient by a board of censors. Similarly, once enrolled in the council, a man was a member for life (although liable for expulsion under special circumstances), quite unlike the Hellenic system, which demanded annual elections. Unfortunately, the Hellenic elements in the *lex Pompeia* are less clear, but they certainly included the concept of dual citizenship, something quite alien to the Roman scheme of things.

[18] Pliny *NH* 5.42.146.

[19] Cf. Mitchell 1993, 86-87.

[20] For the *boule* and *demos* of the Sebasteni Tectosages, Bosch 1967, no. 92; and for these institutions usually being recognised as defining characteristics of a (Hellenic) city-state, cf. Plutarch *Mor.* 826e, and *CIL* 3.6866 = *ILS* 6090.

[21] Mitchell 1993, 88-89.

[22] The *lex Irnitana*, for example, contains 97 separate chapters, and was inscribed on ten bronze plaques that, when mounted on a wall, occupied a space *c.* 9 metres long by 58 cm high: González 1986, 147.

[23] Marshall 1968, Ameling 1986, and Lintott 1993, 145-153, for a fuller discussion.

Whatever the precise nature of Pompey's regulations in Pontus-Bithynia, Ancyra's epigraphic record attests to the principal socio-political institutions to be found there and in almost all Hellenised city-states in the Hellenistic and Roman periods: the *phylai*, or voting tribes; the *demos* and the *ekklesia*, or the people and the public assembly; and the *boule*, the executive council and its officers. To these three main units of democratic government, however, a fourth needs to be added, namely the *koinon* of the Galatians, a socio-political and religious body responsible for the Imperial cult.

The Phylai

The epigraphic evidence indicates the existence of twelve *phylai* in Graeco-Roman Ancyra, each presumably assigned to a territorial area as was usual in a Hellenised *polis*.[24] Of these twelve, the numbers and the corresponding names of ten are certain: the *I Maruragene*; *II Pakalene*; *III Menorizeitôn*; *IV Hiermene*; *V Dios Trapezôn*; *VI Sebaste*; *VII* (?)*-mene*; *VIII Claudia Athenaea*; *IX Hiera Bulaea*; *XI Nea Olympias*. The names of the remaining two *phylai* are known to be the *Nerva* and the *Dios Taenôn*, but there is no indication as to which was *phyle X* and which *XII*.[25] On the other hand, as the *VI phyle* is apparently named for Augustus, the *VIII* for a member of the Julio-Claudian dynasty, and the *XI* ostensibly for Hadrian (for after 128, he was often associated with the name *Olympios*), it could be that the 'imperial' *phylai* received their names in chronological order.[26] Indeed, as the chronologically first of this group was the *VI Sebaste* and the last the *XI Nea Olympias*, it has been deduced that *phyle X* was *Nerva* and *phyle XII Dios Taenôn*. In which case it has it has been argued that there were originally six *phylai* (the *I Maruragene*, *II Pakalene*, *III Menorizeitôn*, *IV Hiermene*, *V Dios Trapezôn* and *VI Sebaste*), two being added under Claudius (*VII* (?)*-mene* and *VIII Claudia Athenaea*), two more under Nerva (*IX Hiera Bulaea* and *X Nerva*), and a final two under Hadrian (*XI Nea Olympias* and *XII Dios Taenôn*).[27]

If this restored sequence did indeed reflect an authentic chronological situation, it would indicate that the population of Ancyra might well have doubled in size between the reigns of Augustus and Hadrian.[28] However, the number of *phylai* in a community bore absolutely no relation at all to its physical size,[29] and while it was a common practice to name a newly created *phyle* in honour of an imperial patron, it was equally common to rename an existing one for the same reason. In other words, any idea that the nomenclature of the *phylai* at Ancyra can be used to demonstrate an incremental growth in population has to be rejected. Indeed, it is more than likely that the original constitution

[24] Cf. Plato *Leg.* 745.

[25] French 2003, 60-61.

[26] Bosch 1955.

[27] Mitchell 1977, 80-81, using later evidence to develop on Bosch 1955.

[28] Mitchell 1977, 81.

[29] E.g. Jones 1940, 158-159, quoting the examples of Ilium, with twelve *phylai*, and Ephesus and Alexandria with five, although it might be noted that Antioch – larger in size than Ephesus and equal in area to Alexandria – had no less than 18 *phylai*.

for Ancyra envisaged twelve *phylai* from the start, for this number is commonly found in many other Hellenised *poleis*, as, for example, at Prusa in Bithynia.[30]

This being the case, the names of the Ancyra *phylai*, as they have been handed down to us, reflect a variety of influences. For example, the locative suffix *–ene* reveals that four of the *phylai* – the *I Maruragene*, *II Pakalene*, *IV Hiermene* and *VII* (?)*-mene* - took their name from districts. These were presumably locations within the territory of Ancyra, and quite possibly the names of existing communities joined together in a synoecism when the unit of the Sebasteni Tectosages Ancyrani was first created. This being so, it is quite possible that all of the Ancyran *phylai* were originally named for geographical entities, as was quite probably the case of the *III Menorizeitôn*, which appears to have been named for a place of worship linked with the god Mēn; and the *V Dios Trapezôn* and the *Dios Taenôn*, probably named after places associated with the worship of Zeus. Likewise, perhaps, the *IX Hiera Bulaea*, for as this *phyle* was named for the personification of Ancyra's self-government, it could well have been centred on the same ward as Ancyra's *bouleuterion*, the meeting-place for Ancyra's council. As for the remaining *phylai*, as we have seen, the *VI Sebaste* probably honoured Augustus himself, and the *VIII Claudia Athenaea*, was presumably (re)named for a member of the Julio-Claudian family.[31] However, at first sight, quite why the *phyle Nerva* should have taken its appellation from that emperor is a mystery, until it is observed that during Nerva's short reign of 16 months – 18 September 96 to 28 January 98 – no less than thirteen separate Ancyran coin-types were issued showing a hexastyle temple.[32] The precise significance of the coin-type apart, the implication of this large range of coin types, and presumably an equally large coin-issue, is that the people of Ancyra had good reason to commemorate Nerva on an appropriate scale for some significant donation he had made to their *polis*, perhaps a temple, perhaps something else. Finally, we should note that although the name of the *phyle XI Nea Olympias* is usually taken to be a reference to Hadrian, the only inscriptions from Ancyra that specifically refer to him use the agnomen *Nea Dionysos* rather than *Nea Olympios*.[33]

Each of the *phylai* was headed by a *phylarchos*, and as some of the Ancyran inscriptions are 'dated' with reference to the current phylarch,[34] they were evidently elected on an annual basis.[35] The office is found in many Hellenic communities, as at Prusa, where there were two phylarchs for each of the twelve tribes, but quite what their duties were is uncertain. It has been claimed that the phylarchs served some form of

[30] Jones 1940, 158, and Ameling 1984, 23: cf. Plato *Leges* 745.

[31] Whichever Julio-Claudian it was, it is noteworthy that a significant number of Ancyra's citizens with *tri nomina* had the imperial *gentilicium* Tiberius Claudius, while many of those with *duo nomina* have the names of either Tiberius or Claudius or both.

[32] Appendix 2.6

[33] Bosch 1967, nos. 128 and 129.

[34] E.g., Bosch 1967, nos. 108 and 117.

[35] Those confirmed in office may have assumed their duties on 23 September, Augustus' birthday, that date having been chosen by the province of Asia as the start of its official year: cf. Mitchell 1986, 21.

policing or local registration duty, but this is now thought unlikely.[36] On the other hand, a phylarch of Roman date was honoured in the rural territory of Thracian Philipopolis for supervising matters in groups of villages in such terms as to indicate his post encompassed jurisdictional matters.[37] In truth, the probability is that the duties of a phylarch varied from *polis* to *polis*, and therefore they had no single precisely definable role, although it might be inferred that in those places with a constitution based on the *lex Pompeia*, they had somewhat analogous responsibilities to the *vicomagistri*, the local magistrates and religious leaders found at Rome.[38]

What is clear, however, is that the phylarchs were chosen from a comparatively low social background. For example, while one is known to have been a member of the *boule*,[39] and another was wealthy enough to donate an unspecified building to the *polis*,[40] none of the inscriptions listing men who served in the higher magistracies at Ancyra ever include the rank of phylarch among their previous offices.[41] More ominously, while phylarchs were frequently involved in the business of erecting inscriptions to the senior magistrates of Ancyra and others, it seems that they themselves were never epigraphically honoured for their services while in office, although two did receive honours in the *ekklesia* and *boule* for other services to the community.[42]

A relatively low social origin for at least the majority of the phylarchs is also suggested by their names. While almost all of those Ancyrans who held the higher civic and other public offices in the *polis* have *tri nomina*, indicating Roman citizenship status, only a scant few of the phylarchs have this type of nomenclature.[43] Of the remainder, however, slightly less than half are ambiguously recorded with *duo nomina*, lacking a *cognomen* and thus leaving the question of their citizenship wide open.[44] Some at least of these men could also have been Roman citizens, for not all *peregrini* would or could adopt the full *tri nomina* when they were enfranchised.[45] Consider for example a first century inscription at Coptos, which records the *duo nomina* 'Eintrittsnamen' of several Galatian legionary recruits, and the Spanish municipal charters, which indicate that possession of *tri nomina* only began to be a required feature of Roman citizenship in the Flavian period.[46] On the other hand, those Ancyran phylarchs who are recorded in the

[36] Ameling 1985, 23-25.

[37] *IGR* 1.721, from Hissar, recording a phylarch's 'humane' and 'law-abiding rule'; cf. also *IGR* 1.728, from the same place, recording another but without indicating his duties.

[38] Rüpke 1998.

[39] Bosch 1967, no. 357.

[40] Bosch 1967, no. 201.

[41] Likewise at Prusa, where none of the 200 or so known phylarchs are known to have held any of the higher offices, conforming the relatively low status of the position: cf. Ameling 1984: 24, n.30.

[42] Bosch 1967, nos. 202 and 262.

[43] Appendix 1.1, nos. 1-5 (no. 5 is included here on the basis of what survives of the names of the wife and sons). Cf. Appendices 1.4-1.14 for the dominance of the higher magistrates by those with Roman style names.

[44] Appendix 1.1, nos. 6-14.

[45] Cf. Alföldy 1966, 47-52.

[46] Bosch 1967, 49, for the Coptos inscription; and cf. González 1986, 196, for the Spanish evidence. It might be added that third century records of Roman citizens commonly lack a *praenomen*

Hellenic fashion, with a single name and usually, but not always, their patronymic, and who make up just over half of the number, reveal by their nomenclature that they were most probably not Roman citizens.[47] Even so, a few could have been, as there are cases in which a man was known by both a formal Roman name and an informal Hellenic sobriquet or *signum*, as for example the Ancyran Flavius Heliodoros, 'who is also known as Zarmos'.[48] However, it must be conceded that there are no grounds for assuming this to have been the case here, even in those cases where a phylarch's single name is 'Roman' in origin, and so these men must be adjudged members of the lower (Hellenised) social stratum.

The phylarchs were assisted by a junior officer, the *astynomos*, who was probably also elected on an annual basis. None of the inscriptions from Ancyra specify the role of the *astynomoi*, but they were presumably responsible for the same range of duties as those carried out by their namesakes in other Hellenic communities. These are most clearly defined at Pergamum, where the responsibilities and powers of the *astynomos* were precisely defined by the so-called *lex de astynomis Pergamenorum*, a law of Attalid date but still in force in the early Roman imperial period.[49] According to this, their principal duty was the maintenance of the roads and streets within the community, including overseeing the cleaning of streets and other public areas, and ensuring that all private drains were built as underground structures. No less important, however, was their responsibility as building inspectors, making certain that private buildings were kept in good condition and repaired when necessary, and that the integrity of party walls between adjoining properties was maintained. A third and likewise important role was to ensure the good condition of the water pipes leading from the aqueduct and supplying the public fountains, toilets and drains, and also the quality of private cisterns.

Little can be said regarding the background of the *astynomoi* of Ancyra, for they are only recorded on four inscriptions. However, while Plato recommended that the *astynomoi* be of the highest calibre, chosen from among the members of the upper property classes,[50] this would not seem to have been usually the case at Ancyra: all three of the Ancyran *astynomoi* whose names survive exhibit nomenclature of the simple Hellenic form, a single name with patronymic.[51] Thus, while all three of these men were later elected as phylarchs, as was the *ignotus* referred to on the fourth inscription, and although all four are indicated as having followed highly successful and profitable careers, it might be concluded that in general, they and probably most of the *astynomoi*, came from a lower social stratum than was usual among those Ancyrans who usually achieved the rank of phylarch.

[47] Appendix 1.1, nos. 15-27.

[48] Bosch 1967, no. 76; for other examples at Ancyra, Bosch 1967, nos. 98.15, 98.32, and 98.74, and 332 and 359. See Cagnat 1914, 55-59, for a discussion of the practice in Latin inscriptions.

[49] Klaffenbach 1954 = *SEG* 13.521; cf. Dio 55.8, on the '*stenoparchontes*' or street commissioners of Rome, and *Digest* 43.10.

[50] Plato *Leg.* 763C.

[51] Appendix 1.2.

The *Demos* and the *Ekklesia*

In a community that conformed to the Hellenic democratic ideal, the *phyle* provided the *politai*, the body of citizens who constituted the *demos* and its *ekklesia* or public assembly, with the power to approve or reject honours and decrees proposed by a community's governing *boule*. It is only to be expected, therefore, that both *demos* and *ekklesia* feature in Ancyra's epigraphic record.[52] Yet while the basis of all Hellenised democratic systems was that all citizens had equal political rights, this was not always so in the Anatolian *poleis*, and especially those newly or re-constituted by Rome: in many of these, only a select group of citizens were classed as *ekklesiastai*, that is, members of the *ekklesia* with the right to vote in that assembly.[53] Such seems to have been the case in Ancyra, for while there are roughly equal numbers of epigraphic references to the *demos* and to the *ekklesia*, the latter is always referred to in the sense of being the body where the pronouncements of the *boule* and the *demos* are formally declared[54] suggesting it was more of a representative group chosen from among the *demos* rather than an ecumenical democratic unit.

That apart, the language of these inscriptions is illuminating and instructive, as in only one case can it be deduced that the '*demos*' (i.e., the *ekklesia*) may have voted on something on its own initiative. Such is implied by an inscription on a column recording Lucius Papirius Alexander, for the text notes that he was honoured by 'the *demos* and the *boule*' in that precise order.[55] In all other cases, the relevant inscriptions refer to honours being voted to specific individuals by 'the *boule* and the *demos*' of Ancyra. The truth of the matter was, of course, that Roman style constitutions, as with that imposed on Ancyra, favoured oligarchic rule, the most extreme form of democracy. Consequently neither the *demos* nor the *ekklesia* of Ancyra paid any real or active role in the management of the *polis*: their mention in Ancyra's official documents was simply a charade to maintain the pretence the *polis* conformed with time-honoured Hellenic practices.

The *Boule*

As in any other Hellenised *polis*, the principal administrative organ of Roman Ancyra was nominally its *boule*, and the names of four *bouleutai* survive, one with Roman *tri nomina*, the others with single names.[56] There is no indication in the epigraphic record for the size of the Ancyran *boule*, although it was probably somewhat less than the 450 *bouleutai* indicated for Ephesus on an inscription of Trajanic date, yet somewhat more than the 50 'interim' *bouleutai* who constituted the inaugural *boule* for Tymandus in

[52] E.g., Bosch 1967, nos. 72, 92, 103, 139, 144, 159, 201, 202, 262, and 289.

[53] Cf. Abbott and Johnson 1926, 75, with *IGR* 3.409, from Poglae in Pisidia, and *IGR* 3.800 and 801, from Sillyon in Pamphylia. Dio Chrys. *Or.* 34.21-22 indicates that the linen-workers at Tarsus were excluded from its *ekklesia*, despite being citizens of the place.

[54] E.g., Bosch 1967, nos. 103, 144, and 202.

[55] Bosch 1967, no. 141.

[56] Appendix 1.3.

the third century.[57] However, while the *bouleutai* in a Hellenic *polis* were elected or chosen by lot on an annual basis by the *ekklesia*, this was probably not so in Ancyra, for its charter was based on the *lex Pompeia*, a Roman-style statute that emphasised life-long membership. Instead, the founding members of the Ancyran *boule* were most probably originally chosen from a clearly defined and restricted social and property-owning class, their number subsequently maintained through the annual election of younger men from the same families to the junior magistracies, periodic additions of other notables being made when necessary or desired.

The day-to-day control of the Ancyran *boule* was vested in a group of magistrates collectively known as the *synarchia*.[58] An official usually known as the *protos archon*, or first magistrate, but occasionally recorded as the *synarchos* chaired the *synarchia*, and the epigraphic record provides the names of four men who held this position, two of them twice.[59] The existence of this office at Ancyra with further records that refer to other men (and one women) having simply held the rank of *archon*, with no qualifying adjective,[60] confirms that Ancyra's political constitution was close to that of Prusa, where the day-to-day workings of the *polis* were controlled by an executive college of five *archontes*, including the *protos archon*.[61]

The *synarchia* was aided in its duties by a number of other, but junior, magistrates, although it is not clear if all of these posts were filled by election or, indeed, even if they were annual appointments. Inscriptions suggest that two posts were held on a regular basis, of which one, the *agoranomos*, or 'market supervisor', was almost certainly appointed annually by the *ekklesia* or the *boule*.[62] The other position, however, that of *eirenarchon*, or 'chief constable', was probably a gubernatorial appointment, a new *eirenarchon* being chosen (or re-confirmed) when a new governor assumed his position.[63] Two other posts were also probably 'irregular', in the sense that they were not filled on an annual basis. A *boulographos*, for one, was necessary only for ensuring that potential magistrates and members of the *boule* met the required property and other qualifications, while the *politographos* was needed only to determine who was eligible for membership of the *demos* and *ekklesia*.[64] It seems more than probable, therefore, that these positions were only filled every five years or so when a census of the *demos* was required. Such apart, the Ancyran inscriptions unfortunately provide no clear evidence for the ranking order – if any – in which these magistracies were held, although it does seem that the post of *boulographos* was above that of *politographos*.[65] More to the point, even though they

[57] Ephesus: Wankel 1979, no. 27, line 223; Tymandus: *CIL* 3.6866 = *ILS* 6090.

[58] Bosch 1967, no. 99; for other *synarchia*, cf. IGR 4.1294 (Julia Gordus); *Stud.Pont.* 3.141 (Amaseia); and Babelon 1898, no. 2165 (Antioch by Caria).

[59] Appendix 1.4.

[60] Appendix 1.5.

[61] Ameling 1984, 24-25, and 1985, 38.

[62] Appendix 1.6

[63] Appendix 1.7.

[64] Appendix 1.8 and 1.9.

[65] Only Claudius Caecilius Hermianus (Bosch 1967, nos. 187 and 188) is recorded in more than one junior magistracy,

are not represented as yet in the epigraphic record, we should expect on the basis of the Bithynian evidence that Ancyra had the full range of other less politically and socially important posts that were nonetheless necessary (indeed vital) for the proper running of a *polis*: a *grammateus* (secretary); an *ekdikos* (lawyer); a *logistes* (public works commissioner); and a *dekaprotos* (tax officer).[66]

The *Koinon* of the Galatians

Ancyra was the location for the principal provincial temple to the cult of Augustus and Roma, making the place the *neokoros*, or 'temple warden' of the Imperial Cult in Galatia. For some reason, however, this title was not used on the Ancyran coinage or on inscriptions until after the *polis* received its second *neokoria* during the reign of Gallienus (253-268).[67] It may have been that as Ancyra was the only obvious urbanized centre in Galatia, then it was not considered necessary to identify the place as *neokoros* until it received its second award.[68] Whatever the precise circumstances behind this delay, there can be no doubt that as Ancyra possessed *neokoros* status, it was also the centre for the socio-political and religious grouping known as the *koinon* or 'commonality' of the Galatians.[69]

The precise function of the Galatian *koinon* remains elusive, although its main duty was the supervision of the imperial cult and its associated festivals, and thus logically the creation of the *koinon* at least belongs to the early years of the province of Galatia. The organizational structure of either the *koinon* or the imperial cult are likewise not entirely clear, although during the principate of Tiberius the imperial cult was headed by an annually elected man with the title of *hierophantes* of the god Augustus and the goddess Roma, and the majority of the office-holders in that period had a Hellenic-style single name and patronymic.[70] By the early 2nd century, however, the title had changed to that of *archiereus*, and it was sometimes more precisely qualified as the *archiereus* of the Galatian *koinon*:[71] in addition, the position could now be held by either a man or woman, all of them with *tri* or *duo nomina*,[72] and they were entitled by virtue of the rank to wear purple garments.[73] The change in titulature is unlikely to represent a simple move away from specific cults for particular emperors in favour of a single generic cult for all of

as *boulographos* and *politographos*, but the two inscriptions listing his offices are contradictory: one gives *politographos* then *boulographos*, the other the reverse. However, it seems the listing on the first inscription is more accurate, the second being somewhat confused.

[66] Cf. Ameling 1985, 19-23.

[67] Burrell 2004, 172-175, citing Mitchell 1982, no. 403, and coins of Gallienus, for which see now Arslan 2004, 190-214.

[68] Cf. Burrell 2004, 344.

[69] Cf. Price 1984, 15-16, and 18-19, on the equivalency between social, political and religious elements in the period.

[70] Bosch 1967, 30, and Mitchell 1986, 19; also Appendix 1.10.

[71] Bosch 1967, no. 102, a man with the imperial *nomen gentilicium* Cocceius, indicating citizenship (probably) ultimately derived from the emperor Nerva, suggests the date.

[72] Appendix 1.11.

[73] Mitchell 1977, 6.

them, as at least four Ancyrans who were *archiereis* were also *sebastophantei* at some point in their career:[74] this might indicate that there was a distinction between being the head priest of the imperial cult and the reigning emperor, and a more junior office as priest of the imperial family and/or deceased emperors. Alternatively, the *sebastophantes* may have been a civic official simply connected with the administration of the Temple to Augustus and Roma.[75]

To confuse matters even further, several Ancyran inscriptions also report the office of *Galatarchon*, or 'leader of the Galatians'. Moreover, some of the people thus recorded also held the office of *archiereus*, indicating they were not identical positions.[76] It could be, therefore, that the Galatian *koinon* had two principal post-holders, one the *hierophantes* or *archiereus*, responsible for all priestly and cultic activities, the other, the *Galatarchon*, dealing with all other socio-political matters.[77] In any case, this changeability and multiplicity of titles surely indicates that the organisation of the Galatian koinon and the Galatian Imperial Cult was neither imposed nor supervised from above, but was instead a purely local phenomenon.[78]

When the imperial cult was originally established at Ancyra, its chief priests were expected to contribute to the welfare of the community, a type of euergetism that normally came in the form of ephemeral but satisfying gifts such as public shows and banquets, and donations of olive oil and grain.[79] Eventually, however, the Galatian koinon started to copy the long-established Hellenistic *poleis* of western Asia Minor, in instituting their own organised public festivals or *agones* on a four-yearly cycle. Consequently, although many of the Ancyran *archiereis* still gave the kinds of benefactions that their predecessors were famed for,[80] the *polis* was eventually host to three much more famous festivals, that known as the *Megala Augusteia Actia* probably being the earliest. The name indicates that it mirrored the Hellenic-style 'games' instituted at Nicopolis by Agrippa in 27 BC, although exactly when this festival was established at Ancyra has been the subject of debate. It is not referred to on the 'priest-list', and so it was presumably inaugurated some time after Tiberius, yet the earliest and only epigraphic evidence belongs to the mid-2nd century or later, while it is not named on the Ancyran coinage until the reign of Gallienus.[81] An inaugural date under Valerian and Gallienus has been suggested, as most festivals named *Augusteia* are of that period:[82] yet the style of the one inscription naming the event suggests an earlier date, and it would be quite natural for the Galatian tribes to honour their primary benefactor as early as was

[74] Appendix 1.12.
[75] Mitchell 1977, 74, with further references.
[76] Appendix 1.13: those both *archiereis* and *galatarchontes* are: Bosch 1967, nos. 100, 139, and 142.
[77] Cf. Rossner 1974.
[78] Cf. Mellor 1981, 1004.
[79] Cf. Bosch 1967, no. 51; Mitchell 1993, 108-111.
[80] E.g. C. Julius Severus: Bosch 1967, nos. 105-106.
[81] Bosch 1967, no. 288; Arslan 2004, no. 223.
[82] Robert 1960, 367.

possible. By contrast, the introduction of the second Ancyran festival, the *Agones Mystikoi*, an artistic event, can be precisely dated, for an inscription informs us it was inaugurated on 7 December 128.[83] As for the third festival, the *Megala Isopythia Asclepieia Sotereia (Antoneineia)*, this was evidently inaugurated during the reign of Caracalla, and was perhaps established on the personal initiative of Titus Flavius Gaianus, an Ancyran ambassador to that princeps.[84]

Each of these festivals was organised and supervised by an *agonothetes*, or 'superintendent of the games'. The *agonothetei* in Ancyra were apparently elected to their particular festival as and when the occasion demanded, quite unlike the system in Prusa, where the presiding first archon automatically became the *agonothetes*,[85] and it might be speculated with a degree of certainty that those who were elected to these posts in Ancyra were people who saw the post as a means of winning higher office.[86] Yet while it doubtless won a person great popularity among the *hoi polloi*, it naturally would have incurred vast personal expense, especially so as the agonistic games increasingly became a professional rather than an amateur matter for the participants:[87] Hence, perhaps, the post of *agonothetes* of the Galatian *koinon*,[88] presumably responsible solely for those shows that were promoted or sponsored by the *koinon* itself – the *Megala Augusteia Actia*?

THE PHYSICAL TOPOGRAPHY

After surveying the political background of Ancyra, *metropolis* of the province of Galatia, it remains to consider the physical effect of its elevation to a provincial centre, a natural starting point being to what extent Lollius or any of his successors might have materially assisted the people of Ancyra with the introduction of a physical infrastructure for their new *polis*. As it is, the whole question of 'imperial involvement' in the urbanisation of the 'barbarian' provinces – a group to which Galatia belongs – is one of those issues in Roman archaeology for which opinion perennially swings from one extreme to the other. Briefly stated, the evidence for the existence or the extent of any 'hands-on' activity on behalf of the imperial administration is both scant and contradictory, but it nonetheless does exist: thus it becomes a matter of squaring the circle. For example, Dio, with a dramatic date immediately before AD 9, claims that in Gallia-Germania, '*poleis* were being founded (and) the barbarians were adapting themselves to Roman ways, becoming accustomed to holding markets, and meeting in

[83] Bosch 1967, no. 128; cf. Robert 1960, 367-368, and Oliver 1989, 96A-C.

[84] Bosch 1967, nos. 246 and 249-253, and Mitchell 1977, nos. 7 and 8; cf. also Robert 1960, 360-365. The date the games were introduced is shown by local coins of Caracallan date, the most common types showing a single agonistic urn or an (oil) amphora, with a palm branch: Arslan 2004, nos. 150-161.

[85] Ameling 1984, 24-25.

[86] At least two of the five known *agonothetai* became high priests: Gaius Julius Severus (Bosch 1967, 105-106) and Tiberius Claudius Procillianus (Bosch 1967, no, 142).

[87] Cf. Bosch 1967, no. 246, and Mitchell 1977, no. 8, with Robert 1960.

[88] Appendix 1.15.

peaceful assemblages', but nowhere does he hint at any official physical involvement in the process.[89] Tacitus, on the other hand, when describing the activities of his father-in-law Agricola while governor of Britannia in 77-84 gives him a more active role, claiming that he 'urged individuals and helped communities to build temples, public squares and houses'.[90]

The probability is that as a rule, Rome took a laissez-faire approach to the matter of how any newly created city-state proceeded to create for itself an appropriate urban centre. So long as a centralized place existed for the proper administration of the designated territory and above all the collection of taxes, then the physical form of that centre was of little concern to Rome itself. As we learn from Pausanius, and the oft quoted example of Panopeus in Phokis, even as late as the early 2nd century, a *polis* in the strict sense, as an independent political unity, did not require an urbanised centre for its successful internal administration and government: physical amenities such as government offices and a market place, or a gymnasium and a theatre, never mind fountains and a water supply, were quite simply not essential in political terms.[91] But it should not be forgotten that Pausanius drew attention to Panopeus precisely because it was unique in the Hellenic world, for the general opinion held that, just as Plato opined, a *polis* was a physical reality, not a theoretical concept, and a place that included, *inter alia*, civic buildings, *gymnasia* for the young and warm baths for the old, as well as the other amenities needed to satisfy the demands of its *politai*.[92]

Likewise for Rome, for the law codes dealing with who was and who was not a resident of a *civitas* defines the first group as those who have access to and use of its civic amenities, explicitly defined as a forum, a bath house (*balneum*), regular shows (*spectacula*) and organised religious feast days (*festi dies*), and thus by implication, temples.[93] Similarly for writers of the Roman period, as with Lucretius, who described the growth of Rome in terms of its rise to a city-state, while Tacitus stressed how the '*urbium cultus*' was the defining fact of civilized life.[94] Aelius Aristides, for his part, noted that 'the whole civilized world' was formed of 'localities full of *gymnasia*, fountains ... (and) temples', Tertullian adding that *fora* and *balnea* were among God's gifts to mankind (although he defended a Christian's right not to participate in certain communal activities such as *spectacula* and temple maintenance).[95] Philostratus claimed that after the gods and religion, man's primary need was for the city, a theme echoed by Cassiodorus, who was at pains to emphasise the civilizing influence of the urban centre.[96]

[89] Dio 56.18.2.
[90] Tacitus *Agr.* 21.
[91] Pausanias 10.34.
[92] Plato *Res.* 2.369b, and *Leg.* 6.761c.
[93] *Digest* 50.1.27.1 (Ulpian), and 50.1.53 (Modestus).
[94] Lucretius 5.925-1240; Tacitus *Ann.* 2.52.
[95] Aelius Aristides, *To Rome* 97; Tertullian *Apol.* 42.2, 4-7, and 9.
[96] Philostratus *Ep.Apol.* 11; Cassiodorus *Ep.Var.* 8.31.

These references make it clear that – Panopeus apart - the classical city was not just a political entity. It was a place with a concentration or people where the appropriate public buildings and facilities could be found to facilitate a shared life-style and communal activities, whether these activities were politics, religion, or leisure. Yet the precise stimulus that occasioned newly annexed groups of people to re-locate and create an urban centre in those newly formed provinces that lacked these entities, such as Galatia, remains obscure. Tacitus, however, gives a clue: according to him, with Agricola's encouragement the British aristocracy, 'who had previously disdained the Roman language now most wanted to be articulate in it. Then they gave prestige to our form of dress and the toga began to be commonly seen. Slowly they adopted those charming vices, porticoes, bath-houses and smart dinner parties, those things which are called civilisation …'.[97] In other words, while there was a degree of positive official encouragement, and quite possibly some direct sponsorship (in the form of tax relief) in the 'Romanisation' of Britannia, the principal impetus came from the British aristocracy itself.

In which case, therefore, we might assume that the urbanisation and monumentalisation of Ancyra occurred simply because the richest and most influential members of Galatian society desired this to be the case, once they had learnt to associate urban life with civilisation. After all, while Deiotarus' *nea polis* might have been a stillborn project, the Galatian aristocracy was credited with being 'near' civilised in the Hellenic sense: hence the common use of the term '*Gallo-Graeci*' to refer to them.[98] That being so, the re-location of the aristocracy to a fixed political centre, and its embellishment with suitable public buildings, physically expressed their possession of *politeia*, and showed a willingness to adopt a new *bios*, a new lifestyle, in the same way that other 'barbarian' territories annexed by Rome set about transforming themselves.[99] Hence the abandonment of the established ancestral centres in favour of a new site where a suitably urbanised centre could be established *de novo*, with the appropriate allocation of land within it for the Galatian aristocracy and for the building of its monuments.

The Urban Framework (Fig 1)

Archaeology will not (unfortunately) allow us to identify the precise stages in the processes that led to the monumentalisation of Ancyra. It is commonly assumed that a primary step in the formation of a new classical city was the creation of an orthogonal street plan, although this was apparently not as essential as is often assumed.[100] Nonetheless, such orthogonal plans were usual and the presence of a regular street-grid in the newly formed *polis* of Ancyra would at the very least point to a communal decision by the local aristocracy and the *koinon* of the Galatians to create an urban centre on the Hellenic model. In which case, it is of interest that von Vincke's 1839 plan of Angora

[97] Tacitus *Agricola* 21.
[98] E.g. Strabo 12.5.1 (566), and Livy 38.17.9.
[99] Cf. Strabo 4.1.5 (180-181), and 4.1.12 (187), with regard to the process in Massilia and Narbonensis.
[100] Cf. MacDonald 1986, 17-31.

indicates that certain of the contemporary street and property alignments conformed to a regular north-south and east-west pattern:[101] it is therefore a reasonable assumption that this regular pattern originated in an earlier planned layout of classical date.[102]

This conjecture finds some support in a number of correspondences between the 19th century plan of Angora and observed or inferred details of Graeco-Roman Ancyra. To begin with, when von Vincke prepared his plan, the focus of Ottoman Angora was the open space which later became the original centre of the Republican capital, and which is now represented by the Hükümet Meydanı, or 'Government Square'. Before the creation of the Turkish Republic and the construction of office buildings around this space, the Temple to Augustus and Roma evidently dominated it from the east, while the so-called 'Column of Julian' originally stood at the southwest of this area before it was moved to its present position in the centre during the 1920's.[103] Such ceremonial columns would naturally occupy a prominent public place at the time of their erection, which, together with the relationship between the square and the Temple to Augustus and Roma, strongly suggests that this open space could well be of some antiquity, and thus the location of the *agora* of classical Ancyra, a place indicated by the previously mentioned post of *agoranomos*. Indeed, such speculation might find support from the excavations on the Ulus Eski Çarşısı site in 1995-1996 (Fig1.1), on the south side of the square, for these revealed the back wall of a north-facing building at least 31 m long: while the date of this structure remains to be determined, both its scale and style suggest it belonged to a substantial edifice, conceivably a *stoa*, as would be usual along one side of an *agora*.[104]

Whether or not the Hükümet Meydanı represents the descendant of the *agora* of classical Ancyra, there is other circumstantial evidence to support the idea that the place had an orthogonal plan. For example, one of the 19th century streets recorded by von Vincke appears to correspond with the 5.8 m. wide classical-period north-south avenue, with 1.5 m. wide pavements on either side, found at the Ulus Eski Çarşısı site (Fig 1.1). In addition, at least one building in Ancyra, the 'Askeri Cezaevi' bath-house in Soğukkuyu (Fig 1.5), is aligned exactly on a north-south and west-east axis in such a way as to suggest its occupies a previously defined rectangular space – in other words, an *insula*. From this admittedly circumstantial evidence, then on the basis of von Vincke's plan, it can be inferred that Ancyra was provided with an orthogonal layout with regular *insulae* in the order of 140-160 m. square. If so, there is one clear exception to this arrangement, namely the northwest – southeast colonnaded street located in 1931 immediately north of the Çankırıkapı Bath-house.[105] However, this could well preserve the line of a pre-

[101] Eyice 1971, Pl. 39. These arrangements were substantially altered and modified during the re-urbanisation of Angora in the 1920's and 1930's, following the decision to make it the capital of the newly created Republic, to the extent that the present street and property plan of the Ulus and adjacent districts bears little resemblance to that of 19th century Angora.

[102] Cf. the situation at Antioch on the Orontes, where substantial sections of the original planned street layout are preserved in the street system and property boundaries of modern Antakya: Poccardi 2001.

[103] Akok 1955, Fig. 2: the decoration of the column's capital suggests it is probably a 6th century monument: cf. Kautzsch 1936, 202.

[104] Temiszoy, *et al.*, 1996, 13.

[105] Dalman 1932, 122-133, and Fig. 3.

existing route, and quite probably that of the ancient trans-Anatolian highway linking Ancyra and Gordion via a ford or bridge over the Ankara Çayı.

The Temple to Augustus and Roma (Fig 1.2a and 2b; and Fig 2)

Making the collective decision to found a new urban centre from scratch with an orthogonal plan was one thing: giving it the appropriate buildings and physical infrastructure was another, and such was the case in the new province of Galatia. The monumentalisation of Ancyra was a slow process, as it depended entirely on the availability of architects, craftsmen, and manpower; access to suitable building stone and other necessary materials; and above all the resources of the local aristocracy. Thus the earliest securely dated building of Graeco-Roman Ancyra, its Temple to Augustus and Roma, was not completed until the early years of the reign of Tiberius, some forty years after the province of Galatia was formed.

The date of this building is indicated by the well-known 'priest list' inscribed on the left-hand *anta* of the *pronaos*. It begins with an introduction stating that this is a list of those who were the successive 'priests of the Galatian koinon for the god Augustus and the goddess Roma', virtually certifying that this structure was the principal cult temple of the Galatian *koinon*.[106] These men are listed in their order of office, along with details of the benefactions that all of them except one provided during their annual term of office, while the palaeography indicates that in each case, the individual name and relevant details were added during or at the end of each priest's term of office. However, although the list begins with the title of the priesthood, followed by the names of three consecutive priests of the cult and their benefactions, it is then interrupted by a single line entry indicating that a man identified by his *nomen* as Metilius was in office as governor of Galatia. The list then continues with the names of another 17 or so priests of Augustus and Roma, along with their benefactions, where appropriate, but it is broken up into groups at intervals corresponding to every four or five years by the names of Metilius' successors.[107] More to the point, the last named governor on the list, Basila, can be securely dated as governor of Galatia in the closing years of Tiberius' reign, revealing that the beginning of the list - and thus the first use of the temple as a completed building - cannot be any earlier than about 18/19.[108] To which it can be added that while the name of the presiding governor is a constant repetitive feature in the list, it is absent from the beginning, suggesting that the list as it survives is a continuation of one that existed elsewhere. This tends to confirm that work on the temple must have started before c. 18/19, and suggests that the consent for its construction (and perhaps for the Imperial Cult itself) was given immediately after Augustus' death in AD 14.[109]

[106] Mitchell 1986, 18.

[107] Cf. Bosch 1967, no. 51; Mitchell 1986, 28-29, and 1993, 108.

[108] Mitchell 1986, 28-29, and 1993, 108; Leschhorn 1992, 334-336.

[109] This would only allow four years or so from the start to the finish of the temple. Such is not impossible, for the Temple to Jupiter Tonans in Rome, a building of apparently modest size (Augustus allegedly called it the lobby of the

Busbecq, Ferdinand I's ambassador to Süleyman the Great in 1553-1555, was the first to report on the temple in post-classical times. Academic interest in the building subsequently focused on the *Res Gestae* - Mommsen's 'Queen of inscriptions' - the Latin text carved on the inner walls of the *pronaos*, the Greek text on the outer south-east face of the *cella*, in both cases, the in-situ masonry surfaces having been smoothed down to receive the text. Thus it was not until 1926 that the site was archaeologically explored for the first time, further work being carried out in 1928, and again in 1939.[110] This revealed that the substructure of the *crepidoma* consisted of a grid based on a series of 6 m. deep piers, the load-bearing supports for the columns, which were linked at a higher level by a series of low walls to help distribute the weight of the temple superstructure, and also act as coffer-dams to contain the earth, clay and rubble fill that formed the foundation for the stylobate and the temple pavement.[111] It is a method of construction that accords with the description provided by Vitruvius for such work, and thus not too much should be made of the similarity in the technique used here and for the foundation of the temple at Pessinus.[112]

The outer edge of the *crepidoma* consisted of a continuous line of blocks tied together with swallow-clamps, and calculations showed that the temple platform was accessed by a flight of nine steps.[113] However, the original form of the temple superstructure has been the cause of debate. The excavated evidence showed that the foundations of the *peristasis* and the *pronaos* were built together, and that the overall form of the structure was that of an octastyle pseudo-dipteral building with a tetrastyle prostyle *pronaos* and a distyle *in antis opisthodomos*. The use of this plan, and certain aspects of the ornamentation on the *cella* walls, convinced the excavators that the temple belonged to the 2nd century BC. As it was, the earliest examples of Ancyra's coinage that were then known, of Neronian date, depicted an Ionic tetrastyle temple, but no octastyle structure was shown on the coinage until the time of Caracalla. The excavators consequently concluded that there had been a lengthy delay in the construction of this building, resulting in the *cella* standing by itself for a long period, and thus the tetrastyle building shown on the Neronian coinage was the tetrastyle *cella* of the unfinished temple, its completion with the octastyle *peristasis* being celebrated on the coins of Caracalla.[114] From this combination of 'evidence', the excavators suggested that the temple might have been originally intended for a local Anatolian god, perhaps Mên, with or without his consort, Meter Theon, and that it was only later adapted for use by the Imperial Cult.[115]

nearby Temple to Jupiter Capitolinus: Suetonius *Aug.* 29.1 and 91), was vowed in 26 BC and consecrated four years later in 22 BC: cf. Richardson 1992, 226-227; and Hasselberger, et al, 2002, 157.

[110] Krencker and Schede 1936, 9; Koşay 1957 a and b; Guterbock 1989.

[111] Krencker and Schede 1936, 23-26, 38 and 30.

[112] Vitruvius *De Arch.* 3.4; cf. Waelkens 1986, 39-42.

[113] Krencker and Schede 1936, 43.

[114] Krencker and Schede 1936, 13, 23-27, and 42-43; cf. Guterbock 1989, 156-157.

[115] Krencker and Schede 1936, 40-42; cf. Tuchelt 1985, 317-319, and Varınlıoğlu 1992.

Doubts were immediately cast on this theory,[116] and subsequently a very detailed analysis of the separate architectural elements, verified that the temple was designed as an octastyle pseudo-dipteral building in the Corinthian Order in the late Augustan period, and completed as such under Tiberius, when the 'priest list' began to be inscribed on the left-hand *anta*.[117] That the structure is purely Hellenistic in form and was not designed in an 'official' Roman design of a podium with steps at the front only, as in such 'imperial' buildings as the 'Temple to Augustus' at Pisidian Antioch, is to be explained by structures of the later type as having been commissioned by Italic colonists.[118] More to the point, given its location and date, the finished temple must have dwarfed anything else then standing in Ancyra, especially if, as is possible, it was surrounded by a *temenos* wall enclosing the entire summit of the Ulus hill. Such is suggested by a c. 55 m. length of walling running parallel to and 40.75 m. distant from the north-west side of the cella (Fig. 1.2b), for although the visible superstructure is certainly late Roman in style and defensive in character (it includes at least two square towers), it apparently stands on foundations built in an 'early Roman' manner some 10 m. below the level of the temple's *crepidoma*.[119] Whether or not such a *temenos* wall did exist, the decision to build and complete the temple does in itself, as S. Mitchell commented, mark a crucial step in the advance of civic life at Ancyra,[120] on a par with the decision by the Galatian aristocracy to relocate to and focus urban development on this area.

The Theatre (Fig 1.3, and Fig. 3)

Ancyra's theatre, discovered on the western slopes of the Kale Hill in 1982,[121] is quite likely to have been among the buildings constructed in the initial stages of the monumentalisation of Ancyra. After all, theatres expressed Hellenisation, for they were an indispensable adjunct to the Hellenic *bios*, and the entertainments held in them a vital aspect of civic life. The structure itself, however, is purely Roman in design, for it was built in the 180 degree Roman style with a storied *scaenae frons*, not the open horseshoe plan favoured in the Hellenic world. Indeed, there is a degree of similarity in the overall design of this building with the late Flavian south theatre at Gerasa in modern Jordan, for both share the unusual feature of conjoined *itinera versurae* and *aditus maximi*, a plan not apparently found elsewhere in Anatolia.[122] This might indicate they are of a similar date, especially as that the earliest pottery found at the Ancyra theatre site belongs to the same period, and that swallow-tail clamps were used extensively in its construction. Whether or not the architect responsible for the Ancyra theatre was familiar with the plan of that at

[116] Wiegand 1937, 419.
[117] Waelkens 1986, 48-57, and 57; cf. Mitchell 1986, 29.
[118] Cf. Waelkens 1986, 71.
[119] Mamboury 1949, 97 and 100, suggesting it was part of an enclosure wall measuring 118 x 156 m.
[120] Mitchell 1986, 33.
[121] Bayburtluoğlu 1986. The following structural and other details regarding the theatre are all taken from that report with the addition of more recent personal observation.
[122] Cf. Bennett 2003, 5-6.

Flavian Gerasa, however, he certainly made the maximum use of the topography in his design. Thus the *ima cavea* and the central section of the *summa cavea* were carved from the bedrock, while the remainder was built of andesite, local 'marble' being used for decorative details.

Although the structure had been badly robbed in antiquity, doubtless in connection with the building of the medieval defences on the Kale hill, sufficient survived to show that the *ima cavea* was divided into four *cunei* by three *scalaria*, with a *diazoma* at a level corresponding to the 10th or 11th row of seating. Above this was a further 10 or 12 rows of seating in the summa cavea, giving an overall diameter for the theatre of c. 56 m. The *scaenae frons* still visible at the site is clearly part of the original plan, and has the usual three doorways, while putlogs show that it was originally provided with a wooden floor. The currently visible *proscaena*, on the other hand, which uses both brick and stone blocks in its construction, is equally evidently a later addition of more than one phase, and perhaps replaces an earlier timber version. Despite such indications of economy in construction, the *scaenae frons* was decorated with statuary, which included a cloaked male figure, possibly an emperor; a seated philosopher(?); and a standing Pudicita figure: the only piece of architectural embellishment found at the site, however, was a voussoir in the form of a Silenus head.

The Çankırıkapı Bath-house (Fig 1.4, and Fig 4)

Ancyra's principal public bath-house, the Çankırıkapı Bath-house, was first investigated in 1931, when the building of Çankırı Caddesi revealed an open area surrounded by a series of rooms.[123] Then identified as the 'forum' of Roman Ancyra, it was correctly recognized as the palaestra of a bath-house after further excavations in 1938-44,[124] and it is now classed with that group of Anatolian bath-houses defined as the 'Bath-gymnasium' type, in which the Roman-style bath-house is built together with a large Hellenic-type gymnasium.[125] Indeed, it may have been among the largest of its type, for if it were ever completed, then it would have covered an area of about 160 x 200 m.. However, excavation of the extreme south-east of the complex in 1944 uncovered walls and rooms of a completely dissimilar plan to those on the north west, and while the published report of this work provides no information of their date or their physical relationship with the bath-house proper, their method of construction shows they belong to the late- or even post-Roman period.[126]

As designed, the Çankırıkapı bath-house was certainly an ambitious edifice, with a *palaestra* that had 32 columns on each side (thus 128 in total), each one *c.* 6 m. high with Corinthian capitals. The central room on the northeast side may have been a 'Kaisersaal', while the rooms to the north were presumably offices, the paired rooms found on the

[123] Dalman 1932, 121-32.
[124] Arık 1937, 49-51; Dolunay 1941, 264-266; Akok 1968.
[125] Yegül 1995, 251-313
[126] Akok 1955, 311-315 and Fig. 3, and 1968, fig 6.

northwest and southeast sides of the *palaestra* perhaps being libraries and/or lecture halls. The bath-house proper was built of alternating courses of 4-rows of brick and of andesite blocks, with local 'marble' for the decorative details, and it was fronted by a range of three rooms, the central one with a *natatio*, flanked by hypocausted rooms that were presumably *apodyteria*. Behind this front range was a centrally-located *tepidarium*, with a plunge-pool and other rooms, the rear of the complex being taken up by the *caldarium* with its associated external furnaces. A number of service corridors, some underground, provided the access routes for maintenance, and there was evidence that the superstructure was lavishly decorated with floor and vault mosaics, marble veneer, statues, and sculptured friezes, including a figure playing a cithara.[127]

The date of the Çankırıkapı Bath-house is uncertain. It is usually assigned to the early third century, as the earliest coins found with the structure belong to the reign of Caracalla, and the method of construction is typical of this period.[128] Some have even linked its construction with Ancyran inscriptions recording an emperor 'Marcus Aurelius Antoninus', suggesting a visit by Caracalla on his way to the east in 215, for it is known that many of the eastern *poleis* began ambitious building projects in anticipation or in hope of his visit.[129] However, one Tiberius Julius Justus Julianus, named as *archiereus* and *ktistes* ('founder') of the *metropolis* Ancyra, is usually credited with the construction of the Çankırıkapı Bath-house as a series of matching inscriptions stylistically dated to the third century, and erected by the *phylai* of Ancyra, honour him for his gift of a *balaneion* to the *polis*, it being assumed that this must be the same structure.[130] This could be the case. But the whole basis of the argument is that most of the coins found at the Çankırıkapı Bath-house are from the reign of Caracalla, yet all they really show is that the complex was in use at the time these coins were in circulation - and it must in any case be remembered that (on the basis of the number of types), Ancyra's most prolific coining period was under Caracalla. Moreover, the dating of either an inscription or a building method on stylistic grounds is a most inexact science, to which it must be added that a structure of the magnitude seen in the Çankırıkapı Bath-house would be better described as a *thermae*.[131] The whole point being that an earlier date for the construction of this complex is possible, and is indeed suggested by the fragments of an architrave found on the site in 1931, decorated in what was then at least considered to be a 'Hadrianic' style.[132]

The Aqueduct (Fig 1.10)

Although the Çankırıkapı Bath-house is located only about 200 m. from the Ankara Çayı, it is some 45 m. above this stream, and it was supplied with the necessary

[127] Dolunay 1941, Pls. 84 and 85.
[128] Cf. Dolunay 1941, 266; Foss 1977, 62 and 87; Arslan 1996: also Dodge 1987, 112, on the building method.
[129] Bosch 1967, no. 260; Mitchell 1977, 64-65; cf. Dio 77.9.6-7.
[130] Bosch 1948, and 1967, nos. 255-258: cf. Broughton 1938, 778; Erzen 1946, 98-99; Mitchell 1993, 114-116 and 214.
[131] Cf. Yegül 1992, 488, on the distinction between the two terms.
[132] Dalman 1932, 125; cf. Cooke 1998, 47.

water by a conduit that approached the site from the south-east.[133] This in turn was probably fed by the aqueduct of the inverted siphon type that crossed the valley of the Ankara Çayı east of the Kale hill, and whose line was indicated by the pierced blocks of andesite found at the Cebeci railway station and at the Saraç Sinan mosque in 1944-45, more than thirty others being re-used in the nearby early medieval defences on the south-eastern summit of the Kale hill.[134] The blocks used for this conduit are on average 65 x 65 cm in section, and 55 cm. deep, with a bore of about 16 cm. Each has a raised flange or 'male' joint at one end, generally 30 cm. in diameter, and the other end having the recessed 'female' receptor joint, at 32 cm. diameter. The joints were sealed with a white lime-based mortar, while several blocks have a hole in the upper surface for cleaning purposes, others having both upper and lateral holes, indicating they were junction pipes. The origin of this aqueduct system is unknown, although as it evidently passed through the Atpazarı Meydanı, at an elevation of about 980 m. then its source was probably the headwaters of the Ankara Çayı on the northwest slope of the Elma- or Küredağı, some 30 km. southeast of Ancyra.[135] In which case a *castellum divisorium* structure perhaps existed somewhere in the area of Atpazarı Meydanı, to filter and aerate the supply, before the aqueduct continued down the line of Anafartalar Caddesi, where it was located in 1947-48.[136] The date of the system is also unknown, although the earliest known inverted siphon system in Asia Minor is thought to be that at Patara, built in the Flavian period.[137]

Other Buildings (Figs 1.5 and 5)

Remarkably little has been fully reported concerning any other buildings of Roman Ancyra. For example, although the north-south street found on the Ulus Eski Çarşısı site (Fig, 1.1) was lined with a series of back-to-back rooms on the west, apparently part of a single 24 m. wide building, and another building(s) was located on the east, their exact date, form and function are yet to be determined.[138] Likewise very few details – yet excellent plans, section and reconstructions drawings - are available for the remarkably well-preserved hypocausted building found at the Soğukkuyu 'Askeri Cezaevi' site in 1946 (Fig 1.5 and Fig. 5).[139] This measured some 30 x 30 m, with walls still standing up to 4 m., and it would seem to have been a bath-house of bi-axial type, the construction method, of alternating rows of bricks and andesite, suggesting a 'late' rather than an 'early' Roman date. It was elaborately decorated, with black and white marble flooring and wall veneers, and provided with subterranean service tunnels, but it cannot be determined if it was a private or a civic building. However, its relatively small size and

[133] Firatlı 1951, 352-353.
[134] Firatlı 1951, 350-351.
[135] Mamboury 1937, 138-139, and Firatlı 1951, 350.
[136] Firatlı 1951, 351.
[137] Coulton 1987, 80; cf. Hodge 1995, 147-160, for a general discussion of the inverted siphon aqueduct system.
[138] Temizsoy, *et al.*, 1996, Pls. 1 and 2.
[139] Akok 1955, 322-29.

the presence of adjacent rooms terraced into the hill slope, and also what seems to have been a courtyard wall, suggests this structure was a private complex, to be associated with a large town house.

Much less is known and quite probably will never be known concerning the very few other recorded remnants of classical Ancyra's buildings. For example, it seems almost certain that comparatively recent building work has destroyed whatever was left of the building found in 1947 at the Nurettin Ersoy Otel site, directly east of the Çankırıkapı Bath-house (Fig 1.6).[140] This structure, apparently abandoned and/or destroyed in the 3rd century, had at least one apsidal room with a hypocaust and floors of *opus signinum*, while some of its walls were covered with frescoes incorporating geometrical designs, others having a marble veneer. On the other hand, it is to be hoped that continued excavation will reveal more about the nature and date of the hypocausted room found to the south-west of the Çankırıkapı Bath-house in 2002, for field observations suggests that rather than being part of the nearby complex, it is quite probably a private town house of the same type as that found at the Nurettin Ersoy Otel site.[141] As for any other buildings of early Roman date in Ancyra, however, the available evidence is perfunctory at best, although Roman structures were observed during work on the west slope of the Kale hill;[142] at the sites of the Second Grand National Assembly Building (Fig 1.7) and the Ziraat Bankası (Fig 1.8);[143] and also during the construction of the Belediye (Fig 1.9), where one of Ancyra's most important surviving art works, the life-size bronze *imago clipeata* of Trajan, was found.[144] Somewhat further away from the traditional centre of Ancyra, other building remains and a roadway have been reported at the former Halk Evisi, now the National Museum of Art and Sculpture,[145] while several 'Roman' tombs and the remains of a further bath-house, decorated with mosaics were observed in the vicinity of the Railway Station and in the adjacent Gençlik Park.[146]

To supplement the physical remains, some other aspects of Ancyra's urban topography can be deduced from those inscriptions that either specifically refer to standing buildings, or which imply the existence of buildings or areas set aside for specific purposes. For example, several of the benefactions in the 'priest-list' refer to gifts of olive oil, implying that as early as the reign of Tiberius, Ancyra possessed a gymnasium, a touchstone of Hellenic cultural values.[147] Likewise there are several references in the same list to the entire range of Roman *spectacula*, including gladiatorial (one event involving 50 pairs); equestrian (including chariot racing – at Rome itself, the

[140] Akok 1955, 315-322.
[141] Denizli, et al., 2003, 10.
[142] Arık, 1937, 47-49.
[143] Akok 1955, Fig. 1.
[144] Gülekli 1948, 89 and fig 11; cf. Bennett 2001, Pl. 2D.
[145] Arık, 1937, 47-49; Akok 1955, Fig. 1.
[146] Jerphanion 1926, 223; Koşay 1939, 61.
[147] This could just possibly be the same as the '*gymnasion* of Polyeidos' referred to on a late Roman inscription: cf. Bosch 1967, no. 289, with no. 306.

sport par excellence); and *venationes* (with bulls and wild-animals). To which it might be added that the phrasing indicates that these activities took place in the immediate vicinity of the temple itself, although this does not mean that there was a permanent structure devoted for the performance of these *spectacula* – whether in the form of an amphitheatre or a circus.[148] Gladiatorial games, for example, which continued to be popular at Ancyra well into the imperial period,[149] could be held in any open space within or close to the city, if suitably enclosed and provided with seating on a temporary basis.[150] Consequently, these events at the least could well have been held in the *agora*, and perhaps at a later date in the theatre. The equestrian and other animal events, on the other hand, demanded a large open space, and they perhaps took place at the Ancyran locality named as '*Campus*' in late Roman sources.[151] This was quite possibly the low-lying U-shaped valley located between the Temple to Augustus and Roma and the theatre, and which the Central Dolmuş Station now occupies, for this forms a natural circus arena.

Later inscriptions attest to the existence of a range of other buildings in Graeco-Roman Ancyra. Five almost identical texts, to begin with, honour Tiberius Julius Justius Junianus for providing many buildings to the city, among them a *balaneion*, which, as already noted, may be the same as the Çankırıkapı Bath-house.[152] The majority of the other inscriptions, however, are much less specific. Thus Titus Octavius Rufus, who describes himself as a senator, gave a building of uncertain function to Ancyra, as did the former phylarch Zotikos, whose gift was apparently located within a park.[153] Cocceius Seleucos, on the other hand, commissioned a structure that was apparently made of white marble, while Titus Co... contributed a building that required an architrave.[154] Two much later texts, however, commemorating the work of unknown benefactors, are much more instructive. One, for example, reports the restoration of a building referred to as the '*gymnasion* of Polyeidos',[155] while the other commemorates the restoration and repair of several structures, including the 'Hall of Polyeidos' (presumably the same building as the *gymnasion*); the 'building of Theodotus'; the aqueduct and the water distribution system; the prison; the re-roofing of an unidentified building and the '*palatium*', and the 'marbalisation' of a second unnamed edifice.[156]

To the epigraphic evidence we should add those literary sources and coin-types that also give evidence for the urban topography of Ancyra. First among these is

[148] Purpose-built amphitheatres are in any case exceedingly rare in Asia Minor, surviving examples only being known of at Pergamum, Cyzicus, and Anazarbos.

[149] E.g., Bosch 1967, nos. 149-152, 188-194 and 276; and Mitchell 1977: 72-75; Erzen 1946, 97-98.

[150] Cf. the timber amphitheatre erected for a two month period recorded on an inscription at Antioch by Pisidia: Mitchell and Waelkens 1988, 224-225.

[151] Cf. Mitchell 1982b, 104-105

[152] Bosch 1967, 254-258.

[153] Bosch 1967, nos. 167 and 201.

[154] Bosch 1967, nos. 102 and 145.

[155] Bosch 1967, no. 289.

[156] Bosch 1967, no. 306: the *palatium* could well be the same structure as the '*praetorium*' referred to in the Life of St.Clement, who was executed under Diocletian: cf. Mitchell 1982b, 104-105.

Pausanius' record of the Ancyra Temple of Zeus, presumably dedicated to either Zeus Trapezeus or Zeus Taenos, while as Apollo was the favoured deity at Ancyra in the early 4th century, there was probably also a temple in his honour.[157] Then there are references in the Life of St. Plato, a mid-3rd century Ancyran martyr, to the 'basilica' opposite the 'Temple of Zeus' where he was tried before being executed at the '*Campus*'.[158] Ancyra's coinage, on the other hand, although comparatively prolific in producing pieces with temple-types on the reverse, is less helpful with reconstructing the physical appearance of the *polis*.[159] In only four cases can the various di-, tetra-, hexa-, octa- and decastyle structures shown on these coins be associated with any specific temple in Ancyra: the limits of die-engraving capability and flan-size meant that even if the temple-type depicted on the obverse of these coins was intended to represent a specific building, the die engraver often chose or was forced to show this in a stylised way. Thus all that can be said of the many types available is that there is a strong probability that those coins showing an octastyle temple associated with an eagle or a shield in the pediment are generally likely to be illustrations of the Temple of Augustus and Roma, while the one octastyle type (of Caracalla) that shows an anchor is presumably meant to be the Temple to Zeus reported by Pausanius. Those coins that show the local Anatolian deity Mên with either a di- or hexastyle temple, on the other hand, presumably indicate a temple in his honour – but exactly what its architectural style was cannot be ascertained from the coins themselves.[160] Then there is the large number of types issued under Nerva showing a hexastyle temple, but while this might well indicate a cult building commissioned by him, they could equally well commemorate some other benefaction awarded to Ancyra during his reign. Finally, it needs to be observed that while there was evidently a temple built in honour of Gallienus, allowing Ancyra to claim its second neokorate, the coins that commemorate this structure are of the most basic type, and of no use at all in assessing its actual form.[161]

Conclusion

This essay began with the stated intention of rescuing the archaeology of Graeco-Roman Ancyra from obscurity to give it the primacy it deserves as the *metropolis* of the province of Galatia. More to the point, it was hoped that in doing so, it would establish firstly, to what extent Ancyra or its inhabitants were 'Romanised'; and secondly, expose to wider view the comparative wealth of material that demonstrates the extent to which Ancyra had the required features of a true classical city: a defined political system; public and civic buildings; and a communal life revolving around shared cultic and leisure activities.

[157] Pausanius. 1.4.5; cf. the *V Dios Trapezôn*, and the *XII Dios Taenôn*; for Apollo, cf. Mitchell 1982b, 94.

[158] Mitchell 1982b, 104-105.

[159] Appendix 2.

[160] Arslan 2004, 32-34 (Galba, showing a hexastyle structure), and 64-65 (Trajan, with a distyle structure).

[161] Cf. Arslan 2004, 209 and 210, with two opposed distyle temples, the usual way of indicating that a place was twice *neokoros*, although in this case no emphasis should be placed on the reality of the representation: cf. Burrell 2004, 174.

To deal with the second of these matters first, the evidence for the urbanization of Ancyra at a relatively high level is there, most clearly in the epigraphic record for the political structure of the *polis*. The physical aspects of this process are less clear, although what there is available demonstrates that it was slow and probably piecemeal. This presumably came about because – as the evidence suggests – there was little positive action in the process on the part of the imperial administration. True, there are building inscriptions not considered here that record the names of the presiding governor and others in the imperial machinery, but there is nothing to specifically indicate that these inscriptions belonged to structures erected as the direct result of any form of imperial initiative. Instead, both the scheme and the resources seem to have come from the local aristocracy. Yet the citizens of Ancyra were evidently able to raise the funds and the wherewithal for those public buildings and spaces considered necessary for communal activities, both cultic and festive.

However, while Galatia and Ancyra, as the leading city of the province, were both Roman creations, and the Galatian aristocracy evidently enthusiastically adopted certain Roman practices, most notably gladiatorial events, they were much more eager to adopt the Hellenic mannerisms of their immediate neighbours. Greek was used for their inscriptions, Hellenic-style architecture for their cultic and leisure activities, except in the case of the theatre. It seems that the members of the Galatian aristocracy were, on the whole, content to remain large fish in a small pool, choosing to be first in their native *polis* rather than in serving the empire at large.[162] Thus, despite the rapid rise in the number of 'easterners' entering the Roman Senate during the 2nd and 3rd centuries, only three Ancyrans are known to have taken that particular path.[163] All in all, therefore, one is left with the clear impression that there was no such thing as a 'Roman' or even a particularly 'Romanised' Ancyra: while some Roman fashions and cultural traits were eagerly adopted, Ancyra and its inhabitants were more at home in the Hellenised world – hence 'Graeco-Roman' Ancyra.

The most obvious conclusion that comes from this account, however, is that much of what we 'know' about Ancyra relies on supposition and informed speculation. This is indeed true for most of the other classical *poleis* in Turkey that are likewise sealed beneath modern cities. Even so, through careful analysis of the available data, it is possible to reconstruct certain aspects of Ancyra's socio-political (and religious) structure, as well as something regarding its physical appearance. True, we are in effect looking through a dark glass that distorts our view: but at least we can start to redress the imbalanced view of the urbanisation process in Anatolia under imperial Rome.

[162] Cf. Étienne 1958, 231.

[163] C. Julius Severus the elder (Bosch 1967 nos. 156-157); C. Julius Severus the younger (Bosch 1967, no, 158); and Titus Octavius Rufus (Bosch 1967, no. 167). Note, however, Titus Flavius Gaianus (Bosch 1967, nos. 249-253) and Tertullus Varus (Bosch 1967, no. 280), who were members of the equestrian order.

Bibliography

Abott, F.F., and Johnson, A.C., 1926 – Municipal Administration in the Roman Empire (New York).

Akok, M., 1955 – Ankara Şehri içinde Rastlanan İlkçağ Yerleşmesinden Bazı İzler ve Üç araştırma yeri, *Belleten* 19 (1955) 309-329.

Akok, M., 1968 – Ankara Şehrindeki Roma Hamamı *Türk Arkeoloji Dergisi* 17 (1968) 5-37.

Akok, M., and Pençe, N., 1941 – Ankara İstanyonuda Bulunan Bizans Devri Mezarının Nakli, *Belleten* 5 (1941), 617-622.

Alföldy, G., 1966 – Notes sur la relation entre le droit de cité et la nomenclature dans l'Empire romain, *Latomus* 25 (1966), 35-57.

Ameling, W., 1984 – Das Archontat in Bithynien und die lex provinciae des Pompeius, *Epig Anat.* 3 (1984), 19-31.

Ameling, W., 1985 – Die Inschriften von Prusas ad Hypium (= *IK* 27: Bonn 1985).

Arik, R. O., 1937 – Les résultats des fouilles faites à Ankara par la société d'histoire turque *La Turquie Kémaliste* 21/22 (1937) 47-56.

Arslan, M., 1996 – Greek and Greek Imperial Coins Found during the Çankırıkapı Excavations at Ankara, in Ashton 1996, 107-114.

Arslan, M., 2004 – Galatya Krallığı ve Roma Dönemi Şehir Sikkeleri/The Coins of Galatian Kingdom and the Roman Coinage of Ancyra in Galatia (Ankara).

Ashton, R. (ed), 1996 – Studies in Ancient Coinage from Turkey (London).

Bayburtluoğlu, İ., 1987 – Ankara Antik Tiyatrosu, *Anadolu Medeniyetleri Müzesi – 1986 Yıllığı* (1987), 39-43.

Bennett, J., 2001 – Trajan Optimus Princeps (London).

Bennett, J., 2003 – Ancyra, Metropolis Provinciae Galatiae, in Wilson 2003, 1-12.

Bosch, E., 1948 – Ankara'daki Antic Devir Hamamının Müessisi, *III Türk Tarih Kongresi 1943* (1948), 576-581.

Bosch, E., 1955 – Ankara I: Die Phylen, *Anadolu Araştırmaları* 1 (1955), 57-67.

Bosch, E., 1967 – Quellen zur Geschichte der Stadt Ankara im Altertum (Ankara).

Burrell, B., 2004 – Neokoroi: Greek Cities and Roman Emperors (Leiden).

Cagnat, R., 1914 – Cours d'épigraphie latine (Paris).

Cooke, S.D., 1998 – The Monuments of Roman Ancyra Reviewed (unpublished MA Dissertation, Bilkent Üniversitesi, Ankara).

Coulton, J.J., 1987 – Roman Aqueducts in Asia Minor, in MacReady and Thompson 1987, 72-82.

Dalman, K.O., 1933 – 1931'de Ankarada Meydana Çıkarılan Asarı Atika, *Türk Tarihi, Arkeoloji ve Etnografya Dergisi* 1 (1933), 121-133.

Denizli, H., Ateşoğulları, S., and Esen, İ., 2003 – Ankara Roma Hamamı 2002 Yılı Kurtarma Kazısı, *Anadolu Medeniyetleri Müzesi – 2002 Yıllığı* (2003), 28-55.

Denizli, H., Ateşoğulları, S., and Esen, İ., 2005 – Ankara Roma Hamamı 2004 Yılı Kurtarma Kazısı, *Anadolu Medeniyetleri Müzesi – 2003-2004 Yıllığı* (2001), 7-39.

Dodge, H, 1987 – Brick Construction in Roman Greece and Asia Minor, in MacReady and Thompson 1987, 106-116.

Dolunay, N., 1941 – Türk Tarih Kurumu adına yapılan Çankırıkapı Höyüğü Hafriyatı, *Belleten* 5 (1941), 261-276.

Dolunay, N., 1948 – Çankırıkapı Hafriyatı, *III Türk Tarih Kongresi 1943* (Ankara), 212-218.

Dueck, D., 2000 – Strabo of Amasia (London).

Emre, K., Hrouda, B., Mellink, M., and Özgüç, N. (eds), 1989 – Anatolia and the Ancient Near East. Studies in Honor of Tasin Özgüç (Ankara).

Erzen, A., 1946 – İlkçağda Ankara (Ankara).

Étienne, R., 1958 – Le culte impérial dans la péninsule ibérique d'Auguste à Dioclétien (Paris), 231.

Firatlı, N., Ankara'nın İlk Çağdaki Su Tesisatı, *Belleten* 15 (1951), 349-359.

Fittschen, K., 1985 – Zur Datierung des Augustus-Roma-Tempels in Ankara, *Archaeologischer Anzeiger 1985*, 309-315.

French, D.H., 2003 – Roman, Late Roman and Byzantine Inscriptions of Ankara: a selection (Ankara).

González, J., 1986 – The Lex Irnitana: a new copy of the Flavian Municipal Law, JRS 76 (1986), 146-243.

Guterbock, H.G., 1989 – The Temple of Augustus in the 1930s, in Emre, et al. (eds) 1989, 155-157.

Gülekli, N.C., 1948 – Ankara, Tarih Arkeoloji (Ankara).

Hänlein, H., 1981 – Zur Datierung des Augustustempels in Ankara, *Archaeologischer Anzeiger* 1981, 511-513.

Halfmann, H., 1986 – Zur Datierung und Deutung der Priesterliste am Augustus-Roma-Tempel in Ankara, *Chiron* 16 (1986), 35-42.

Jerphanion, G. de, 1926 – Mélanges d'Archéologie Anatolienne (Beirut).

Jones, A.H.M., 1940 – The Greek City (Oxford).

Kautzsch, R., 1936 – Kapitellstudien (Leipzig).

Klaffenbach, G., 1954 – Die Astynomeninschrift von Pergamon (Berlin).

Koşay, H. Zübeyr, 1939 – The Strata of Civilisation in Ankara, *La Turquie Kémaliste* 31 (1939), 58-64.

Koşay, H. Zübeyr, 1957a – Ankara Augustus Mabedi Kazısı, *Anatolia* 2 (1957), 133-135.

Koşay, H. Zübeyr, 1957b – Augustus Tempel in Ankara, *Anatolia* 2 (1957), 137-138.

Krencker, D., and Schede, M., 1936 – Der Tempel in Ankara (Berlin).

Lavan, L. (ed), 2001 – Recent Research in Late-antique Urbanism (Portsmouth RI).

Leschhorn, W., 1992 – Die Anfänge der Provinz Galatia, *Chiron* 22 (1992), 315-336.

Lintott, A., 1993 – Imperium Romanum: politics and administration (London).

MacDonald, W., 1986 – The Architecture of the Roman World: an urban appraisal (London).

MacReady, S. and Thompson, F.H., (eds), 1987 – Roman Architecture in the Greek World (London).

Mamboury, E., 1937 – Ankara: Guide Touristique, (Ankara).

Mamboury, E., 1949 – Les parages du temple de Rome et d'Auguste à Ankara, *Türk Tarih, Arkeoloji ve Etnografya Dergisi* 5 (1949), 96-102.

Marshall, A., 1968 – Pompey's Organization of Bithynia-Pontus: Two Neglected Texts, *JRS* 58 (1968), 103-109.

Mellor, R., 1984 – The Goddess Roma, *ANRW* 2.17.2, 950-1030.

Metin, M., 1997 – Ulus Kazısı 1995, *VII Müze Kurtarma Kazıları Semineri 1996* (Ankara), 199-220.

Mitchell, S., 1977 – R(egional) E(pigraphic) C(atalogues) A(sia) M(inor), *Anat. Stud.* 27 (1977) 63-103.

Mitchell, S., 1982a – Regional Epigraphical Catalogues of Asia Minor II: The Ankara District (Oxford).

Mitchell, S., 1982b – The Life of Saint Theodotus of Ancyra, *Anat. Stud.* 32 (1982), 93-114.

Mitchell, S., 1984 – The Greek City in the Roman World: the case of Pontus and Bithynia, Acts of the 8th International Conference of Greek and Latin Epigraphy (Athens), 120-133.

Mitchell, S., 1986 – Galatia Under Tiberius, *Chiron* 16 (1986) 17-33.

Mitchell, S., 1993 – Anatolia: land, men and gods in Asia Minor I: The Celts and the Impact of Roman Rule (Oxford).

Mitchell, S., and Waelkens, M., 1998 – Pisidian Antioch: the site and its monuments (London).

Moatti, C. (ed), 1998 – La mémoire perdue. Recherches sur l'administration romaine (Paris).

Oliver, J.H., 1989 – Greek Constitutions of the Early Roman Emperors from Inscriptions and Papyri (*MAMA* 178: Philadelphia).

Poccardi, G., 2001 – L'île d'Antioche à fin de l'antiquité: histoire et problème de topographie urbaine, in Lavan 2001 – 155-172.

Price, S.R.F., 1984 – Rituals and Power: the Roman imperial cult in Asia Minor (Cambridge).

Remy, B., 1989 – Les carrières sénatoriales dans les provinces romaines d'Anatolie au Haut-Empire (Istanbul).

Richardson, L., 1992 – A New Topographical Dictionary of Ancient Rome (New York).

Robert, L., 1960 – Inscription Agonistique d'Ancyra, concours d'Ancyra, in L. Robert, *Hellenica XI/XII* (Paris), 350-368.

Rossner, M., 1974 – Asiarchen und Archiereis Asias, *Studii Clasice* 16 (1974), 101-142.

Rüpke, J., 1998 – Les archives des petits collèges: le cas des 'vicomagistri', in Moatti 1998, 27-44.

Sherwin-White, A.N., 1966 – The Letters of Pliny: a Historical and Social Commentary (Oxford).

Strobel, K., 2002 – State Formation by the Galatians of Asia Minor: politico-historical and cultural processes in Hellenistic Central Anatolia, *Anatolica* 28 (2002), 1-46.

Tuchelt, K., and Preisshofen, F., 1985 – Zur Identitätsfrage des Augustus-Tempels' in Ankara, *Archaeologischer Anzeiger 1985*, 317-322.

Varınlıoğlu, E., 1992 – Meter Theon, *Anadolu Medeniyetleri Müzesi – 1990 Yıllığı* (Ankara 1992), 39-43.

Waelkens, M., 1986 – The Imperial Sanctuary at Pessinus: archaeological, epigraphical and numismatic evidence for its date and identification, *Epig.Anat.* 7, 37-73.

Wiegand, E., 1937 – Krencker und Schede, der Tempel in Ankara, *Gnomon* 13 (1937).

Wilson, P., 2003 – The Archaeology of Roman Towns (Oxford).

Yegül, F., 1995 – Baths and Bathing in Classical Antiquity (London).

Appendix 1: Public and Religious Officials in Ancyra

NO. OFFICE	NAME	REFERENCE
1.1. *Phylarch*		
1	M. Flavius A...	Bosch 1967: 75
2	Post. Jul. Antoninus Maximus	Bosch 1967: 251
3	Aurelius Agesilaos Secundus	Bosch 1967: 251
4	Flavius Cyriksides Valerianus	Bosch 1967: 252
5	*Ignotus*	Mitchell 1977: 11
6	Varus Logos	Bosch 1967: 105 and 107
7	Claudius Aquila	Bosch 1967: 117
8	Aelius Magnus	Bosch 1967: 117
9	Julius Chreisimus	Bosch 1967: 117
10	Julius Apollophanes	Bosch 1967: 117
11	Claudius Maximus	Bosch 1967: 117
12	Anmios Asclepos	Bosch 1967: 139
13	Valerius Timolaos	Bosch 1967: 140
14	Julianus Gaius	Mitchell 1977: 9
15	Severianus	Bosch 1967: 103
16	Aquila, son of Decimus	Bosch 1967: 117
17	Cleitarchos,son of Bokon	Bosch 1967: 117
18	Zenon, son of Artemon	Bosch 1967: 117
19	Valens, son of Gaius	Bosch 1967: 117
20	Deiotarus, son of Sarpedon	Bosch 1967: 117
21	Heracleon, son of Bassus	Bosch1967: 117
22	Philonedes, son of Vilion	Bosch 1967: 117
23	Nikephoros, son of Alexandros	Bosch 1967: 184
24	Zotikos, son of Bassus	Bosch 1967: 201
25	...rotas, son of Diodorus	Bosch 1967: 202
26	Ponticos, son of Asclepios	Bosch 1967: 357
27	Quiricus, son of Manes	Mitchell 1977: 9
1.2 *Astynomos*		
28	Zotikos, son of Bassus	Bosch 1967: 201
29	...rotas, son of Diodorus	Bosch 1967: 202
30	*Ignotus*	Bosch 1967: 262
31	Ponticos, son of Asclepios	Bosch 1967: 357
1.3 *Bouleutes*		
32	Ponticos, son of Asclepios	Bosch 1967: 357
33	Aurelius Eutyches Mercurianus	Mitchell 1982: 181
34	Alexander	Mitchell 1982: 195
35	Diogenes, son of Alexander	Mitchell 1982: 195

NO. OFFICE	NAME	REFERENCE
1.4 *Protos Archon*		
36 *(Synarchon)*	Claudius Proclus	Bosch 1967: 99
37 (twice)	Lucius Papirius Alexander	Bosch 1967: 140-141
38 (twice)	Titus Flavius Gaianus	Bosch 1967: 249-253; Mitchell 1977: 7
39	Claudius Caecilius Hermianus	Bosch 1967: 287
1.5 *Archon*		
40	Tiberius Claudius Bocchus	Bosch 1967: 100
41	Gaius Julius Severus	Bosch 1967: 105-106
42	Latinia Cleopatra	Bosch 1967: 117
43	Aurelius Dionysius	Bosch 1967: 292-293
1.6 *Agoranomos*		
44 (four times)	*Ignotus*	Bosch 1967: 101
45	Gaius Julius Severus	Bosch 1967: 105-106
46	*Ignotus*	Bosch 1967: 263
1.7 *Eirenarch*		
47	Tiberius Claudius Bocchus	Bosch 1967: 100
48	Latina Cleopatra	Bosch 1967: 117
49 (more than once)	Lucius Papirius Alexander	Bosch 1967: 140-141
1.8 *Boulegraphos*		
50 (twice)	Claudius Caecilius Hermianus	Bosch 1967: 287-288
51	*Ignotus*	Bosch 1967: 289
1.9 *Politographos*		
52	Titus Flavius Gaianus	Bosch 1967: 249-253; Mitchell 1977: 7
53	Claudius Caecilius Hermianus	Bosch 1967: 287-288
1.10 *Hierophant Seb.*		
54	Castor, son of King Brigatos	Mitchell 1993, p. 108
55	Rufus	Mitchell 1993, p. 108
56	Pylaemenes, son of King Amyntas	Mitchell 1993, p. 108
57	Albiorix, son of Ateporix	Mitchell 1993, p. 108
58	Amyntas, son of Gaezatodiastes	Mitchell 1993, p. 108
59	...eias, son of Diognetus	Mitchell 1993, p. 108
60	Albiorix, son of Ateporix	Mitchell 1993, p. 108
61	Metrodorus, son of Menemachus	Mitchell 1993, p. 108
62	Musanus, son of Artiknus	Mitchell 1993, p. 108
63	...s, son of Seleucus	Mitchell 1993, p. 108
64	Pylaemenes, son of King Amyntas	Mitchell 1993, p. 108
65	(? Marcus) Lollius	Mitchell 1993, p. 108
66	Seleucus, son of Philodamus	Mitchell 1993, p. 108
67	Julius Ponticus	Mitchell 1993, p. 108
68	Aristocles, son of Albiorix	Mitchell 1993, p. 108
69	Quintus Gallius Pulcher	Mitchell 1993, p. 108
70	...ides, son of Philon	Mitchell 1993, p. 108
71	Pylamaenes, son of Menas	Mitchell 1993, p. 108
72	(? Julius) Aquila	Mitchell 1993, p. 108

NO. OFFICE	NAME	REFERENCE
1.11 ***Archiereus/ia***		
73	Tiberius Claudius Bocchus	Bosch 1967: 100
74	Cocceius Seleucos	Bosch 1967: 102
75	Gaius Julius Severus	Bosch 1967: 105-106
76	Claudia Aquila	Bosch 1967: 107
77 (twice)	Latina Cleopatra	Bosch 1967: 117
78	Ulpius Aelius Pompeianus	Bosch 1967: 127
79	Memmius ...	Bosch 1967: 128
80	Julius Aelius Macedo	Bosch 1967: 139
81	Lucius Papirius Alexander	Bosch 1967: 140
82 (twice)	Tiberius Claudius Procillianus	Bosch 1967: 142
83 (three times)	Julius Justius Junianus	Bosch 1967: 255-258
84	Claudius Caecilius Hermianus	Bosch 1967: 287
85	Tertullus Varus	Bosch 1967: 280
1.12 ***Sebastophant/ai***		
86	Tiberius Claudius Bocchus	Bosch 1967: 100
87	Gaius Julius Severus	Bosch 1967: 105-106
88	Latina Cleopatra	Bosch 1967: 117
89	Julius Aelius Macedo	Bosch 1967: 139
	Tiberius Claudius Procillianus	Bosch 1967: 142
1.13 ***Galatarch***		
90	Tiberius Claudius Alexandros	Bosch 1967: 100
91	Julius Aelius Macedo	Bosch 1967: 139
92	Tiberius Claudius Procillianus	Bosch 1967: 142
93	Tiberius Claudius Bocchus	Bosch 1967: 100
94	Claudius Aernilius Statorianus	Bosch 1967:143
95 (twice)	Caius Aelius Flavianus Sulpicius	Bosch 1967: 161-164
96	Claudius Caecilius Hermianus	Bosch 1967: 287 and 288
1.14 ***Agonothetes***		
97	Gaius Julius Severus	Bosch 1967: 105-106
98 *(agones mystikoi)*	Ulpius Aelius Pompeianus	Bosch 1967: 127
99	Tiberius Claudius Procillianus	Bosch 1967: 142
100 *(IsoAsc.Sot.Anton.)*	Titus Flavius Gaianus	Bosch 1967: 249-253; Mitchell 1977: 7
101	*Ignotus*	Bosch 1967: 263
102 *(Augusteia Actia)*	Claudius Caecilius Hermianus	Bosch 1967: 287
1.15 ***Agon. Koinon***		
103	Julius Aelius Macedo	Bosch 1967: 139
104 (twice)	Titus Flavius Gaianus	Bosch 1967: 249-253; Mitchell 1977: 7

Appendix 2: Temple Architecture on the Ancyran Coinage

No.	Emperor	Temple style	Types	Reference
2.1	**TIBERIUS**			
1		Hexastyle	1	Arslan 2004, p.267: Tiberius no. 1
2.2	**CLAUDIUS**			
2		Hexastyle	6	Arslan 2004, nos. 3-6
2.3	**NERO**			
3		Tetrastyle	6	Arslan 2004, nos. 7-11, M2
2.4	**GALBA**			
4		Hexastyle	7	Arslan 2004, nos. 32-38
2.5	**VESPASIAN**			
5		Hexastyle	12	Arslan 2004, nos. 39-43, B4-B8, M5-M6
2.6	**NERVA**			
6		Hexastyle	13	Arslan 2004, nos. 51-59, BI4-BI7, M9-M10
2.7	**TRAJAN**			
7		Distyle	3	Arslan 2004, nos. 64-65, M12
8		Tetrastyle	2	Arslan 2004, p.267: Trajan no. 2
9		Hexastyle	9	Arslan 2004, nos. 66-73, M13-M14
2.8A	**MARCUS AURELIUS**			
10		Octastyle	2	Arslan 2004, nos. 94, B28
2.8B	**LUCIUS VERUS**			
11		Octastyle	2	Arslan 2004, nos. Add 1, B32
2.9	**COMMODUS**			
12		Octastyle	1	Arslan 2004, no. F5
2.10A	**CARACALLA (Caesar)**			
13		Decastyle	1	Arslan 2004, no. B51
2.10B	**CARACALLA**			
14		Octastyle	10	Arslan 2004, nos. 142-145, B75-B91
15		Octastyle w/anchor	1	Arslan 2004, p. 268: Caracalla no. 8
2.10C	**GETA**			
16		Octastyle	3	Arslan 2004, nos. 168-169, M23
2.11	**VALERIAN**			
17		Tetrastyle	1	Arslan 2004, no. 185
2.12	**GALLIENUS**			
18		Tetrastyle	2	Arslan 2004, nos. 207-208
19		Distyle x 2	2	Arslan 2004, nos. 209-210

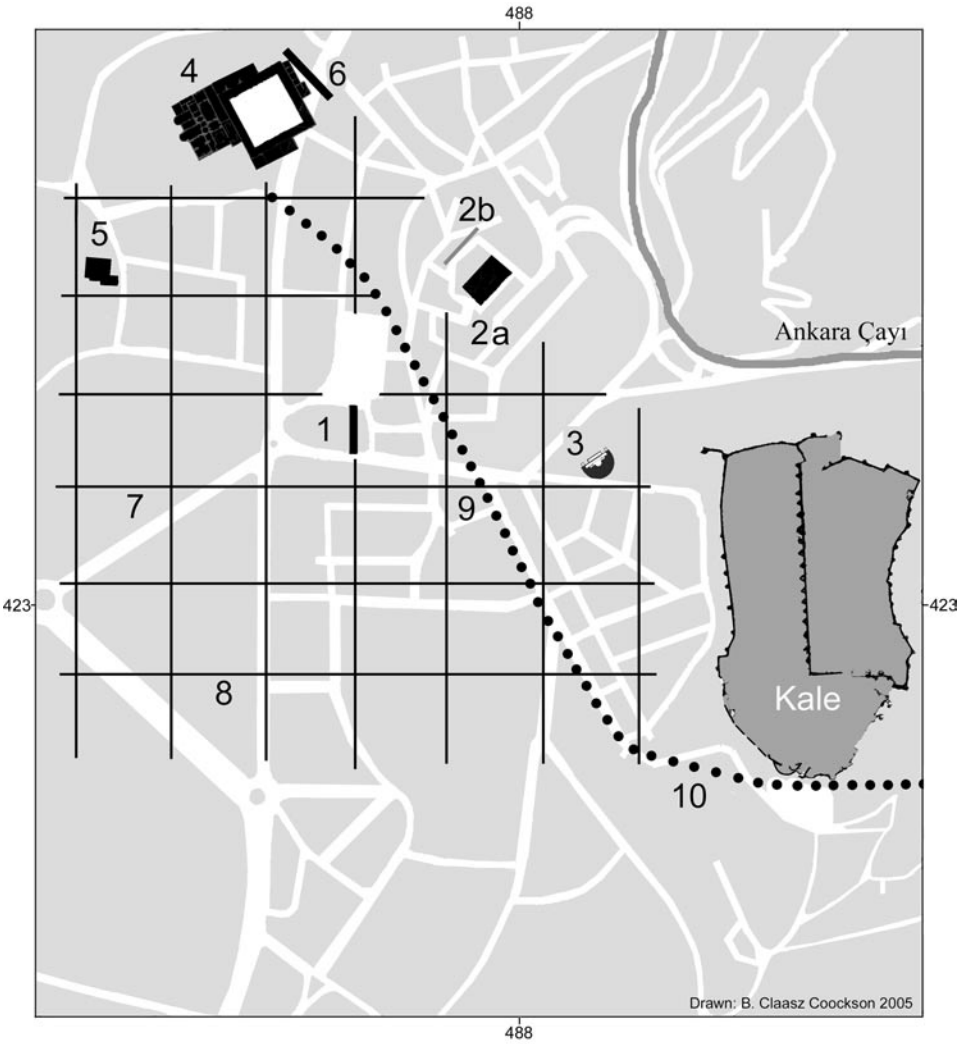

Fig. 1. The remains of classical Ancyra in relation to the medieval kale and the modern street system, with the putative orthogonal plan of the classical *polis* overlaid, and the line of the Ankara Çayı (now sealed by the Bentderesi Caddesi) indicated. Key: 1: the Ulus Eski Çarşısı site; 2a: the Temple to Augustus and Roma; 2b: the possible *temenos* wall; 3: the theatre; 4: the Çankırıkapı Bath-house, with colonnaded street to the north; 5: the 'Askeri Cezaevi' bath-house (Soğukkuyu); 6: the Nurettin Ersoy Otel site; 7: the Second Grand National Building site; 8: the Ziraat Bankası site; 9: the Belediye site; 10: the line of the aqueduct, according to Firatlı 951.

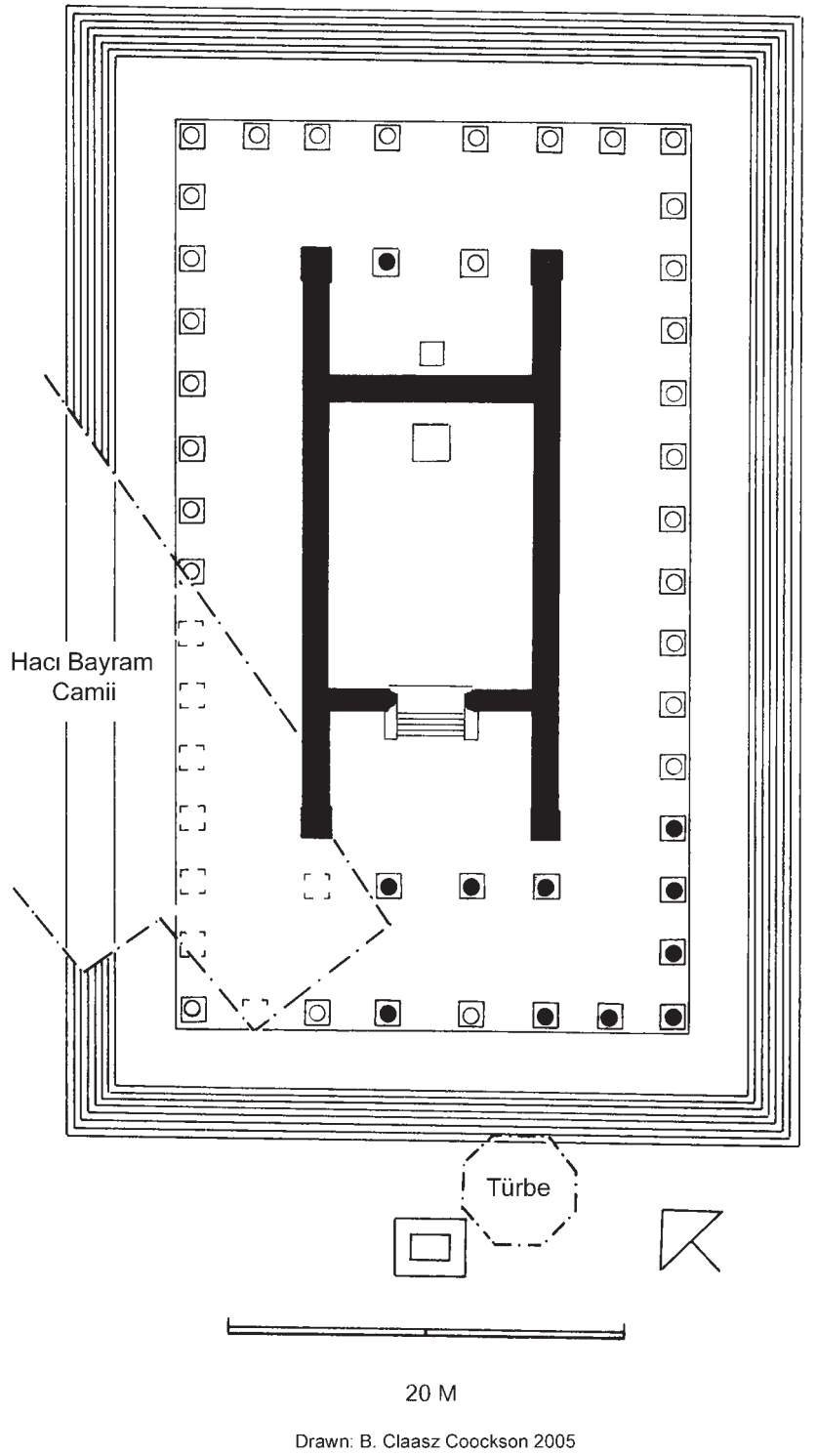

Fig. 2. The restored plan of the Temple to Augustus and Roma, in relation to the Hacı Bayram Camii and the associated türbe, based on the work by Krencker and Schede 1936.

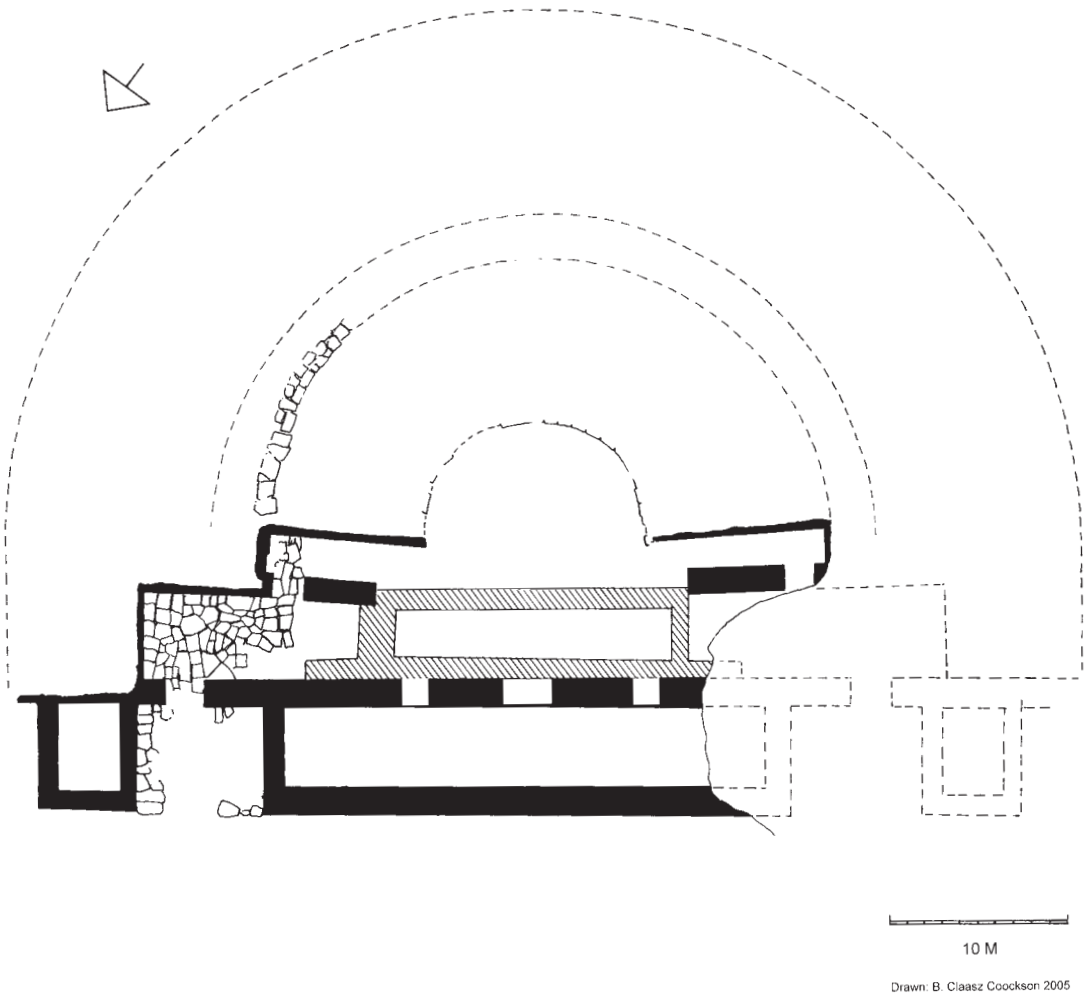

Fig. 3. The Ancyra theatre (after Bayburtluoğlu 7987).

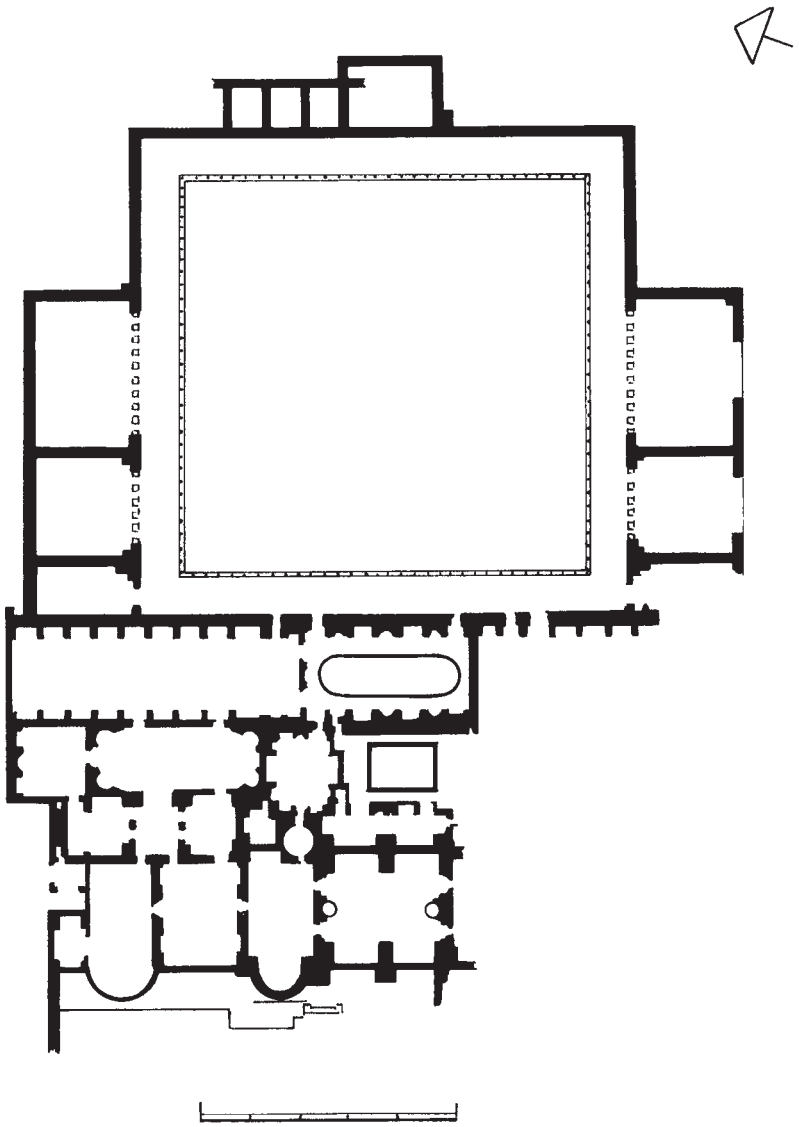

Fig. 4. The Çankırıkapı Bath-house, (after Akok 1968).

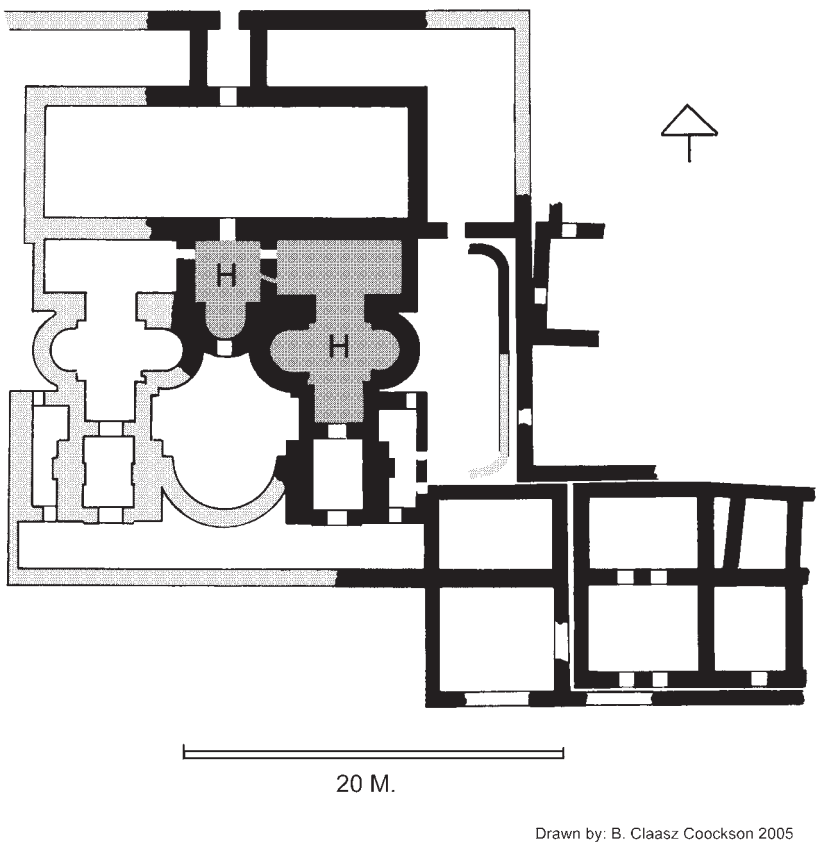

Fig. 5. The 'Askeri Cezaevi' Bath-house (Soğukkuyu: after Akok 1968).

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ANATOLICA XXXII, 2006

BOTTLES AND NETBAGS – Some additional notes on the article about 'Syrian bottles' in ANATOLICA 31, 2005

Thomas Zimmermann[1]

In my article on so-called 'Syrian Bottles', published in ANATOLICA 31, 2005, I discussed one possible interpretation of rhombical 'netbag' designs, visible as relief decoration on some bottles from the Early Bronze Age occupation levels of Kültepe-Karum Kanesh, as providing a clue to how these vessels might have been wrapped or carried (Fig. 1)[2].

Traces of such a rhombical ornament seem to be also visible on the famous golden bottle from treasure complex "A", unearthed by Schliemann in the 19th century AD[3]. The contours of this design are marked by fine scratches, with an organic filling still preserved, and some parts are pronounced by low impressions. M. Treister et al. suggest likewise some functional purpose for these decoration traces, so as to attach some organic braiding or a netbag to carry the vessel[4].

This feature not only links the locally manufactured golden derivative stylistically and chronologically with the ceramic bottles of Early Bronze Age Kanesh at Kayseri, it furthermore points to a distinctive vessel type known from the 'Royal cemetery' at Ur in Mesopotamia. From the 'Royal Grave' PG.337 comes a metal vessel – a "tierbalgförmiges Gefäss", as M. Müller-Karpe named it – with interwoven metal wires attached to the body to form a wide spaced netbag for carrying or suspending the container (Fig. 2)[5]. The artefact can be dated securely to the Early Dynastic IIIa-period, to say approx. 2550-2400 BC, which predates or coincides with the chronology of the imported bottles in Anatolia and their local derivatives[6].

Furthermore another fragment of a highly likely piriform bottle of 'Syrian' type made from greyish clay – a 'classical' metal vessel imitation – that was found at Acemhöyük near Aksaray in Central Anatolia can be included in our distribution list[7].

These phenomena might yield some more evidence for an intense Mesopotamian impact on Anatolian artefact production in the developed third millennium BC. Though shedding some light on the discussion of Mesopotamian-Anatolian connections, the questions remains whether we are witnessing the presence of toreutic artisans of

[1] I am indebted to Dr. Julian Bennett for proofreading this article.

[2] Zimmermann 2005, 164; 168 Fig. 2,1.2.

[3] Antonova et al. 1996, 32.

[4] Ibid.; Treister 2002, 249 f.

[5] Müller-Karpe 1993, 222; Taf. 137,1488; Treister 1993, 250; 240 Fig. 4.

[6] Cf. Zimmermann 2005, 164 f.

[7] Öztan 1989, 409; 418 Fig. 39; Pl. 124,5.

Mesopotamian origin in early Anatolian urban centres, satisfying 'local demands' through combining Mesopotamian metalworking skills with Anatolian fashion; or if we are dealing with local metalsmiths imitating Near Eastern style[8].

References

Antonova, I., Tolstikov, V., Treister, M., 1996 – The Gold of Troy. Searching for Homer's Fabled City, London.

Müller-Karpe, M., 1993 – Metallgefässe im Iraq I (Von den Anfängen bis zur Akkad-Zeit). PBF II,14, Stuttgart.

Özgüç, T., 1986 – New Observations on the Relationship of Kültepe with Southeast Anatolia and North Syria during the Third Millennium B.C., in: Canby, J.V., Porada, E., Sismondo Ridgway, B., Stech, T. (eds.), Ancient Anatolia. Aspects of Change and Cultural Development. Essays in Honour of Machteld J. Mellink, Wisconsin, 31-47.

Öztan, A., 1989 – A group of Early Bronze Age pottery from the Konya and Niğde region, in: Emre, K., Mellink, M., Hrouda, B., Özgüç, N. (eds.), Anatolia and the Ancient Near East. Studies in Honour of Tahsin Özgüç, Ankara, 407-418.

Treister, M., 2002 – The Relative and Absolute Chronology of the Trojan Treasures, in: Aslan, R., Blum, S., Kastl, G., Schweizer, F., Thumm, D. (eds.), Mauerschau. Festschrift für Manfred Korfmann, Remshalden-Grunbach, 245-258.

Zimmermann, T., 2005 – Perfumes and Policies. A 'Syrian Bottle' from Kinet Höyük and Anatolian Trade Patterns in the Advanced Third Millennium BC, *Anatolica* XXXI, 161-169.

[8] See Treister 2002, 250 for further discussion.

Fig. 1.‘Syrian bottle’ with ‘netbag’ relief decoration from Kültepe, Kayseri (after Özgüç 1986) (Scale approx. 1:2).

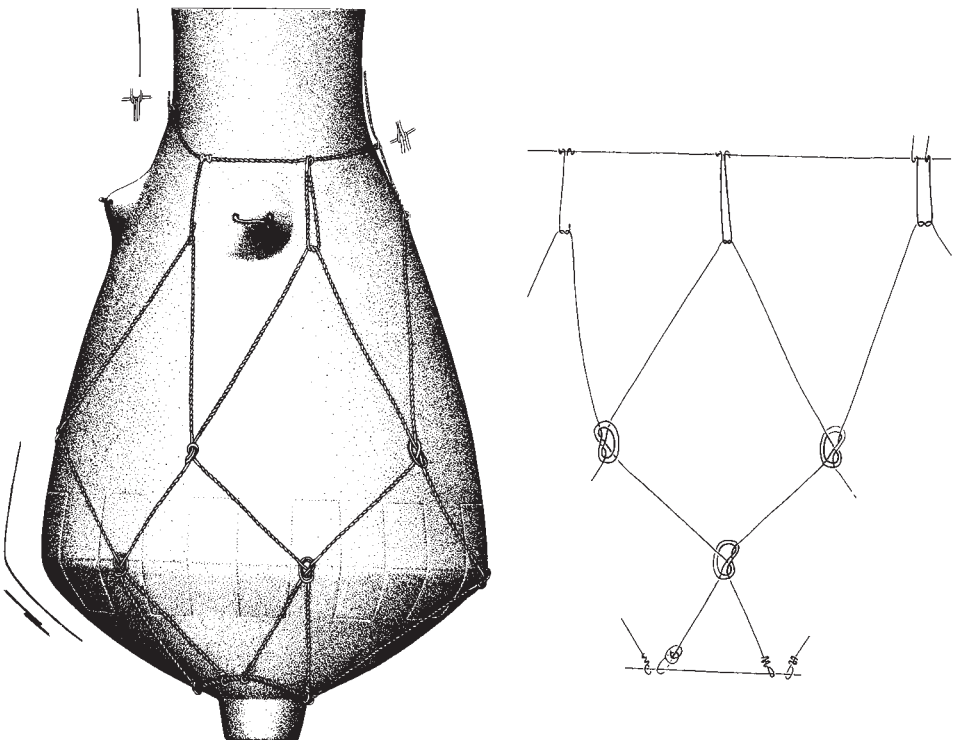

Fig. 2. A so-called “tierbalgförmiges Gefäss” from the Royal Cemetry of Ur, showing a ‘netbag’ of interwoven metal wires (after Müller-Karpe 1993) (Scale 2:5).

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ANATOLICA XXXII, 2006

A RARE WALL-PAINTED DECORATION FROM YABALKOVO
An Early Neolithic Site in Upper Thrace

K. Leshtakov

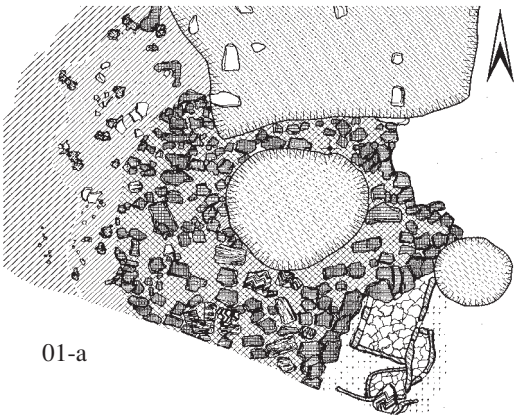
The site of Yabalkovo is situated in the central part of Upper Thrace, in the valley of the Maritsa River. Since 2000 we have carried out salvage excavations here and managed to reveal the general contours of the big open-air settlement with very rich materials. Only brief information about the wall-painting decoration is given as an announcement here[1], due to its importance for the Neolithic studies in Anatolia and the Balkans.

The destroyed dwelling from the first building level, sq. G-F_{17-18}, Northeast sector, was immediately beneath the arable land, and formed massive debris up to 0.70 m thick. The house was only partially explored as the south area was beyond the zone of excavations (Fig. 1.1). The walls were made of hard beaten clay; the floor was plastered with fine whitish limestone substance, covered by organic matter – carbonized mat or carpet. The foundations of the north wall were badly disturbed by later pits but it had obviously collapsed in south direction after a strong fire. The wall-pieces covered a clay beaten structure, probably a grain-storage chamber, situated in the eastern part of the dwelling. Westwards a massive heap of burnt clay pieces was cleaned, and many pieces were patterned with relief decoration. We collected over 10 hard-burnt pieces, about 20 by 40 cm in size, mostly facing up (Fig. 1.2). Because of the poor preservation we could neither reconstruct the decorated structure *in situ*, nor to decide positively whether these pieces belong to the north wall or to an internal walled structure; beyond any doubt the patterns do not cover the entire surface of the wall. We could consider them as a special part of the building decoration connected with the grain-facility nearby. The patterns consist of meanders and zigzag motifs arranged in vertical panels separated by wide groves. The positive parts of the ornaments are red and black, the negative ones creamy-white. The Neolithic inhabitants used mineral dyes, which were fresh for only a few minutes after unearthing, but after that they faded away. The reconstruction reveals an elaborated geometrical composition, whose dimensions are not definable (Fig. 1.3).

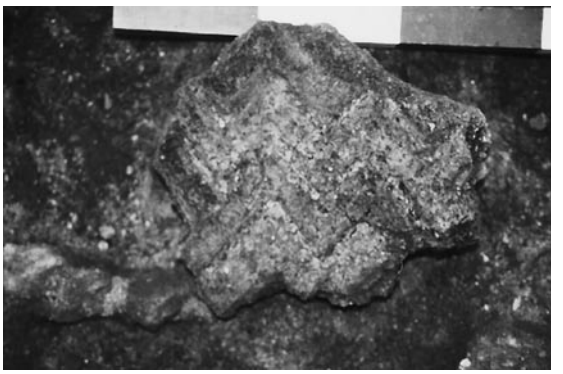
The dwelling and the very rare for the Balkan Neolithic wall painting are dated to the Early Neolithic period – ca. the end of the 7th/very beginning of the 6th millennium BC, according to the pottery (including white-on-red painting) and the small finds, found *in situ*. There is no place here to discuss the parallels of the wall decoration here; however, the general idea is obviously extracted from Anatolian traditions. In addition to this line of speculation it should be pointed out the common Yabalkovo practice of colouring the floors and the inter-dwelling areas by red-ochre, which also has old Anatolian parallels[2].

[1] A more extensive field report will take place in the next issue of ANATOLICA. I would like to express here my gratitude to J. Roodenberg for his kindness of publishing this short communication.

[2] For the general parallels cf. Özdoğan, M. and N. Başgelen (eds.) 1999 – Neolithic in Turkey. The Cradle of Civilization. New Discoveries. Arkeoloji ve Sanat yayınları, Istanbul, Plates: 97, Fig. 14; 123, Fig. 5 – a-ceramic Aşıklı; 133, Fig. 3 – Çatalhöyük layer 7.



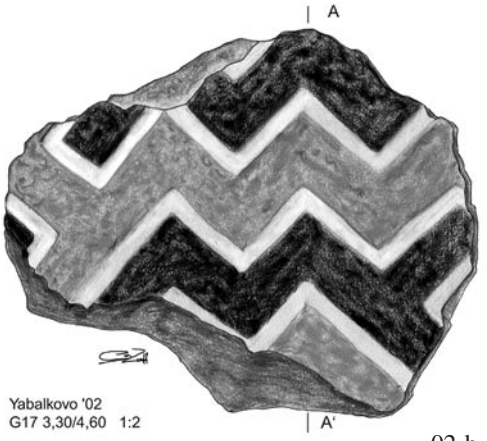
01-a



01-b

01-c

02-a



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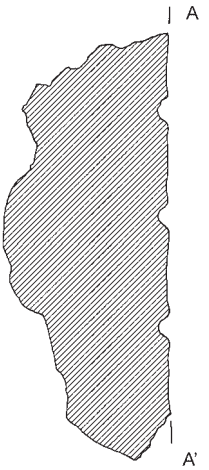
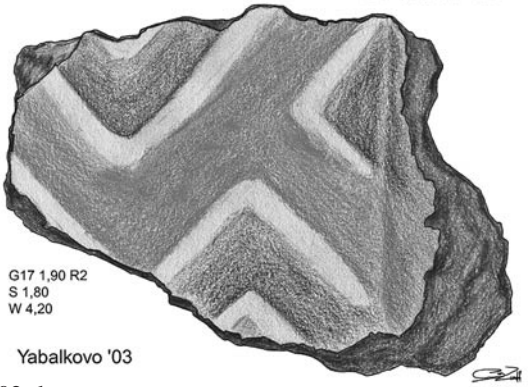
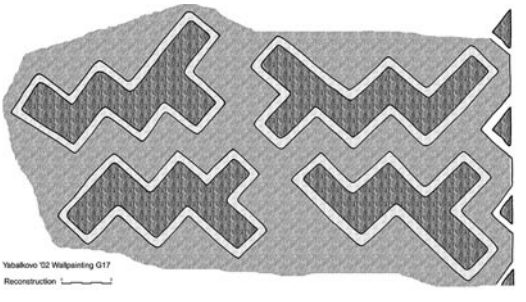


02-c



02-d



03